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Device Choice for On Demand TV

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfillment of the requirements for the degree of Master of Business Administration.

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ABSTRACT

The consumption of media and television has changed dramatically over the past few years. Proliferation of content and devices means that viewers are no longer bound by traditional linear broadcasting and are making extensive use of time shifted content on their own terms. As a result there has been an in depth focus on the new forms of media consumption.

The main objective of this research was to examine the consumer choice of devices to consume time-shifted content, more specifically video-on-demand content. This was examined from a consumer behaviour perspective to determine the choices that viewers make regarding which devices to use; together with an analysis of contextual situations.

The research design was of a descriptive nature and ordinal quantitative data were collected through an electronic survey. 188 respondents who had access and made active use of video-on-demand platforms within a pay-tv operator completed the survey.

Results revealed moderate statistical relationships for some of the individual values that had been identified from consumer behaviour theory. Descriptively, relationships were noted for certain devices and the widespread consumption of others

The research concluded with recommendations for the management of the broadcasting industry based on the findings, as well as direction for further research opportunities.

Keywords: Consumer Behaviour, Device Choice, Video-On-Demand

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfillment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

_____ _____

Anna Vaulina Date

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ABBREVIATIONS

LSM	Living Standard Measures
PVR	Personal Video Recorder
SAARF	South African Audience Research Foundation
TV	Television
OEM	Original Equipment Manufacturer
VOD	Video-On-Demand

CHAPTER 1: INTRODUCTION

The initial chapter of the research report provides and introduces the research problem and outlines the purpose. The research objectives are stated as well as the scope of the research. A brief background of the industry and the sector is also provided, which leads into a literature review in Chapter Two.

1.1 Research Problem and Purpose

The South African Audience Research Foundation (SAARF, 2013) reported that 87% of South Africans have access to television (TV), which equates to 8,8 million households or roughly 43 million people. SAARF stated that on average, each person spends more than three hours a day or in excess of 90 hours per month watching television content.

The Nielsen Company (2013) reported that an American viewer consumes on average 60 hours of content across traditional TV, Internet, time-shifted TV and video on mobile a week. Monthly, this equates to 152 hours of traditional TV viewership, six hours and 20 minutes of TV viewing on the Internet and five hours and 31 minutes on a mobile device. These significant numbers warrant an in-depth analysis of consumer behaviour in relation to TV content viewing across both traditional and new devices.

Doyle (2013) mentioned that technology is at the heart of the media business. This means that media companies must lead any advances across all aspects of production, distribution and consumption. The economic success of a company is dependent on the ability to adjust and capitalise on these technological advances. By understanding the effects of consumer behaviour regarding their choice of TV device, broadcasters, content creators and device manufacturers are better positioned to serve these consumers with the best suited TV viewing experience.

This research aims to address this changing consumer behaviour and make a contribution to existing academic literature in the media consumption and consumer behaviour fields.

1.2 Background to Research Problem

There is little doubt that television is at the center of home entertainment (Narasimhan, 2011). Barkhuus and Brown (2009) proposed that television is the most important home technology in use, based on the amount of hours spent on TV consumption. These authors further indicated that television binds families and creates social order.

Hess, Ley, Ogonowski, Wan and Wulf (2011) as well as Doyle (2010) suggested that television can no longer be considered as a simple linear entertainment experience, as it encompasses multiple platforms and on demand opportunities for media consumption. Within the changing television viewership patterns, viewers are engaging in a "lean-forward" experience of consuming content on their terms and devices (Cesar, Bulterman & Jansen 2009b; Tsekleves, Whitham, Kondo & Hill 2009 and Hess et al. 2011) instead of more traditional "lean-backward" viewing.

The constant change in television technology has allowed for its content to be delivered to multiple devices and through multiple channels, such as traditional televisions, Personal Computers (PCs), game consoles and mobile devices (Hess et al. 2011; Cesar et al. 2009a; Barkhuus & Brown, 2009; Martin, Santos, Shafran, Holtzman & Montpetit, 2010 and Doyle 2010). Tsekleves *et al.*'s (2009) research confirmed a positive correlation between multiple sources of media and adults' television content enjoyment and catching up on missed content. In their study, Abreau *et al.* (2013), concluded that there is substantial television consumption despite the amount of multi-platform offers; and the rise of competition from the Internet, television remains a central part of daily routines.

Technological developments within broadcasting have resulted in video-on-demand service introducing new degrees of viewing freedom, providing viewers with more choice in relation to content, devices, as well as consumption location and time (Rudström, Sjölinder & Nylander 2010; Barkhuus & Brown, 2009). Armstrong (2013) explained that other new television viewing devices and formats are changing the television (TV) landscape. These include smart TVs from television manufacturers, gaming consoles which offer TV streaming and viewing capabilities, new tablet devices as well as completely new devices such as Apple TVs, which present content viewing in a new way that allows consumers complete control over their viewing patterns.

Narasimhan (2011) noted an increasing separation of television content and device roles. Moreover, Barkhuus and Brown (2011) proposed that much academic research

has been conducted around television content, with little attention given to the actual devices that enable viewing. Additionally, focus has been on the dangers of television watching such as loss of childhood, violence and a fall in social engagements. Under these conditions, Hess, Ley, Ogonowski, Wan and Wolf (2012) identified the importance of understanding multi-device media usage in the home environment.

Studies by Konana and Balasubramanian (2005), Wierenga (2006) and Gazley, Clark and Sinha (2011) have focused on consumer choice in television content. However, despite rapid changes in technology little attention has been given to consumer device preferences. Research conducted by Cesar and Chorianopoulos (2009) indicated that contextual situations determine what and how viewers will watch content. This is influenced by whether the viewer is alone, travelling or in a family setting at home. Consumer mobility was further explored by Montpetit, Klym and Mirlacher (2010) with respect to content, but their research also included devices and user behaviour effects; the conclusions being that the future of TV will be mobile, connected and social.

Courtois, Schuurman and De Marez (2011) found that users with access to multiple devices tend to choose more video channels within those devices rather than forming a usage pattern between them. The research also identified “spill-over” effects as users who owned additional devices tended to use them more frequently. These findings are significant as they form the basis on which to develop further research regarding consumer behavior and to explain why and how consumers choose their preferred devices for on demand TV consumption.

There is little doubt that technology and consumer behavior are changing rapidly to suit a more frenetic world, with media content fighting for consumers’ attention (Doyle, 2010). In this fast paced world consumers still find an average of over 90 hours a month in South Africa to watch TV (SAARF, 2013), whereas over 150 hours per person per month are spent on watching TV in America (Nielsen, 2013).

1.3 Business Relevance in South Africa

Globally, the ubiquitous access to broadband has resulted in a proliferation of a number of devices, which are used to consume TV content (Doyle, 2010). Within South Africa, the adoption of broadband has been hampered by excessive costs and challenges within the “last mile” infrastructure. Although the costs of broadband are slowly decreasing, the Department of Communication (2012) reported that only 3,5 million South Africans have access to broadband with 64,8% of all South Africans

having no access to Internet (Census 2011), while 20% of all South African households have a PC or a Laptop and 21% of South Africans have access to pay-tv products. These numbers are meaningful as they confirm the lack of technological infrastructure in South Africa for Internet Protocol Television (IPTV) delivery with consumer households receiving TV through digital or satellite transmission.

Even though the number of South African broadband users is relatively small in relation to the rest of the world, it can be said that TV makes a meaningful impact as the number of TV devices is steadily increasing in South Africa. Viewers can find access to set-top boxes, mobile handheld devices such as tablets, as well as online platforms that allow TV consumption in various formats across a number of channels.

There are original equipment manufacturer (OEM) products in the market that are provided by satellite companies, as well as a number of third party devices that can be used to stream and download video content. As already mentioned, previous studies have focused on content and channel selection with little research available on consumer behaviour and the choice of viewing devices, with at least three recent studies that have identified the need to examine device choice more closely (Barkhuus & Brown, 2011; Hess et al. 2011 and Cesar et al. 2009a). Content choice has been widely documented, yet device choice is a less explored area within the TV broadcasting industry.

In addition to the academic need for this research, this study aims to identify consumer behaviour triggers that determine how viewers choose their devices on which to watch content. This research seeks to allow TV broadcasters to better position their own devices and channels, as well as third party platforms, and to be able to strategically evaluate existing market offerings. The outcomes of this research seek to facilitate broadcasters with a better understanding of consumer behavior and to provide them with insights for better decision-making.

1.4 Research Scope

The scope of this research is limited to the consumer choice of devices for on demand viewing and includes users who have access and make active use of all devices available for viewing on demand TV. Only time-shifted on demand TV viewing has been analysed for the purposes of this study and linear traditional broadcast TV has been excluded.

1.5 Research Aims and Objectives Of The Study

The aim of this study was to evaluate consumer behaviour and device choice within a specific pay-tv operator. This was done to determine the criteria that enable users to select one device over another as an alternative and not a complimentary device. Managers and operators within the broadcast industry need more literature to turn to in order to examine consumer device consumption for TV products.

The study was grounded in consumer behaviour theory and used constructs from utilitarian, hedonistic, situational and contextual fields, seeking to answer whether any of these constructs influence consumer device choice for future use. The main objectives of this study included the following:

- To establish a consumer behaviour framework for device choice.
- To evaluate this framework through the use of identified propositions.
- To analyse and make recommendations for future device choice.

1.6 Conclusion

This chapter outlined the research motivation for the examination of the relationship between devices for on demand TV consumption and consumers' choices for those devices. Chapter Two explores the theoretical literature for these concepts.

CHAPTER 2: LITERATURE REVIEW

The objective of this chapter is to review and provide an overview and background to both device choice for watching television (TV) content and consumer behavior that drives viewers to select their preferred device. An overview of video-on-demand (VOD) and content creation is provided as it is an integral part of content consumption.

2.1 Evolution of TV

Montpetit, Mirlacher and Ketcham (2010) outlined the evolution of TV, which started in the 1930s and was largely comprised of linear TV broadcast that was transmitted live, including live advertising. With changes in technology TV became largely pre-recorded with the exception of sports and news programming. Broadcasting technology has since gone through many technological advancements and consumption trend changes.

TV has developed and transcended its initial functions, and consumption is now largely morphing from linear format to delivery on demand in a more social, “lean-forward” experience (Lee, Choi, Park & Lee, 2011). There is not only an evolution in technology, but also an evolution of the device ecosystem within which TV on demand can be consumed (Montpetit et al, 2010). Changing consumer needs and time pressures, the proliferation of broadband, video capable mobile devices and user mobility fuel this continuous growth. The requirement for change has further been driven by the younger generation who will not continue to make use of aging technology, and they expect these outlined changes to continuously occur (Doyle, 2010).

2.2 Television Industry Overview

Reputable industry bodies have reported that linear TV viewing has decreased, while time-shifted TV viewing has increased (Nielsen, 2013). Watching TV on a mobile device has increased from 5:25 hours in 2012 to 5:48 hours in 2013, watching video on online platforms has increased by almost an hour, up from 5:58 hours in 2012 to 6:41 hours in 2013 and traditional linear TV has decreased in hours year-on-year, decreasing to 147 hours in 2013 from 148 hours in 2012 of monthly viewing. These

numbers indicate a common trend of shifting consumer behaviour from linear traditional TV viewing to online and new platforms.

The shift in consumption behaviour has had a number of repercussions on the television industry. Viewers are no longer tied into traditional TV viewing and broadcasters are forced to adapt to these changes. Furthermore, device manufacturers have to search for new revenue streams and business models. Berte, Vyncke and De Bens (2010) examined the effects of new formats and channels on the TV advertising models and included limitations of the new channels, as well as audience measurement. The decline in advertising revenue additionally has had an impact on the quality of programming and content, which in turn has caused a decline in audience and causes "vicious cycle of network television", which results in there being less people to consume TV content (Berte et al. 2010, p. 55).

The shift in audience impacts advertisers and revenue, which has traditionally been attracted by the large volumes of audiences within one platform. With the fragmentation of this audience across online, mobile and gaming platforms the advertising revenue has migrated to these new platforms, taking a share away from TV advertising revenues (Doyle, 2013). In addition to this, advertising sponsored business models are becoming more dominant in the online video space, with leading video sites such as YouTube and Hulu heavily relying on advertising revenue for finance (Sun & Zhu, 2012). Current trends that include charging for online subscriptions are relatively new with Netflix considered to be the pioneer in this field, while YouTube continues to experiment with different models (Armstrong, 2013). These shifts in viewership and therefore advertising revenue impact the content and device choice that viewers consume across platforms.

2.3 Multi-Screen, Non-Linear TV

In 2007, BBC launched its iPlayer service, which benchmarked the start of a new format of television consumption for mass audiences. Similarly in the US, sites such as Hulu and Netflix provided video content on consumers' terms and devices, whenever and wherever (Bennett and Strange, 2011). These new platforms bring with them new experiences of content, allowing viewers to decide what to watch and when to watch it, fragmenting the previous mass audience into a series of personalized choices. Bennet and Strange (2011, p. 2) further indicated that television must now be examined as a

“hybrid of cultural and technological form that spreads across multiple platforms as diverse as mobile phones, games consoles, iPods and online video services”.

The fast paced change in technological devices is changing consumer habits, with mobile devices enabling a new dimension to the tablet ecosystem (Abreu, Almeida, Teles & Reis, 2013). Van Den Broeck (2008, p. 29) affirmed "the line between television and computer is starting to blur. Televisions sets are already being used as computers and vice versa".

The usage of tablets is growing rapidly; Doyle (2013) indicated that they will become the most prolific platform for online and connected media consumption. The mobile screen experience has become integrated into a multi-screen, cross-platform experience with the TV forming the primary screen, and the PC and a mobile device forming the respective second and third screens. Cesar, Knoche, and Bulterman, (2010, p. 316) stated that “there is increasing anecdotal evidence that the lean-forward PC experience, once considered inferior to the lean-back mode of traditional TV viewing, is gaining importance as behaviours change”. They further explained that the TV is no longer viewed as the highest standard, as other devices are equally valued for their own merits. Traditional perceptions are that the mobile device is an additional, smaller screen, but that has indeed allowed ‘device shifting’. Abreu *et al.* (2013) suggested that mobile devices are complementary or companion devices to the primary screen.

2.3.1 Video-On-Demand

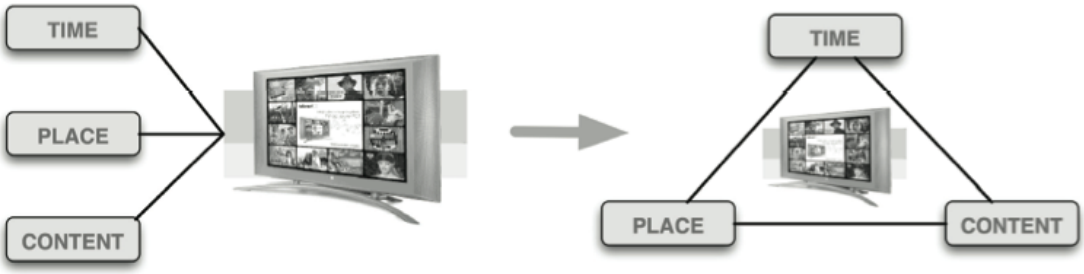
Rapid change from a linear broadcast system to multi-device engagement and consumption is impacting not only on the consumption of content but also the creation, form and curation of content (Doyle, 2010). This allows both broadcasters and video and motion picture industries to produce content that is suited to a wide range of devices and outlets. Services such as video-on-demand (VOD) or “catch up” allow digitised content to be provided to customers on a number of devices. This content does not follow linear broadcasting and can be stored on set top boxes, streamed or downloaded to personal computers and handheld devices (Montpetit, Mirlacher & Ketcham, 2010).

The combined change in technology and consumption behavior means that viewers are now able to watch TV in their time and terms. Time-shifting is a term that describes this movement well and Narasimhan (2011) defined it as the ability of viewers to watch

television content at their time and convenience and not at the original broadcast time. Time-shifting is possible due to television content being available on demand as well as on Personal Video Recorders (PVR) and mobile devices (Gallo, Miers, Coroama, Carvalho, Souza & Karlsson, 2009).

VOD has existed for over 15 years (Van den Broeck et al, 2008) and as a service it allows viewers the opportunity to watch what they want when they want it. This can be called time-shifting, as it liberates people from traditional linear television schedules. VOD encompasses new platforms such as mobile and computer viewing. Van den Broeck further pointed out that VOD breaks down the barrier between the three dimensions of watching television: time, place and content, placing the power for consumption into the users' hands. VOD allows content to be viewed on other screens, which affects the location of the viewer as well as the TV viewing device.

Figure 2.1 Van der Broeck's VOD Three Dimensions



2.4 Changing TV Viewing Consumer Behaviour

Although the family room remains the focal point of TV consumption, households frequently have more than one TV with multiple devices throughout the house (Cesar, Bulterman & Jansen, 2009b). Doyle (2010) argued that this traditional TV family viewing time is being replaced by individualised and personalised viewing, on multiple devices, with social interaction and within a multi-tasking world. Additionally viewers' situational and contextual factors have increasingly played a role, determining how and when consumers view TV content (Cesar & Chorianopoulos, 2009).

It is important to identify two types of consumers who are of high concern to TV related industries. The "cord-cutters" are a group of consumers who choose to sever their cable or satellite subscriptions and rely on the Internet solely for their entertainment content. The "cord-nevers" have never had a television and this group of consumers poses a challenge to the growth of broadcasting and content (Doyle, 2010).

In 2004, Roscoe foretold that television was in transition from the way it was produced to the way it is consumed. It is no longer isolated to one device but connected to many other devices (mobile and connected). Van den Broeck, Pierson and Lieven (2008) observed that television is experienced on multiple levels. TV viewing can be classified as either a primary or secondary activity. Van den Broeck *et al*, (2008) explained three levels of TV viewing:

- TV as a primary activity or in front of the viewer, no other activities are performed while consuming television content.
- TV as a secondary activity or on the side, the viewer may be performing one or multiple activities while watching television. Other studies identify engagement with content as part of this secondary experience.
- TV as a tertiary activity, inactive watching in the background used as “wallpaper”.

2.5 TV Content Creation

Bernhaupt, Abdellatif and Mirlacher (2010) identified that different devices and content formats are associated with different forms of media consumption. It is important to identify the forms of media that are available for consumption.

2.6 Motion Picture Industry

The motion picture distribution chain commences with a theatre release, followed by retail markets such as DVD sales and rental stores, and then the motion picture is licensed to TV broadcasters, firstly in the pay-per-view window, secondly in the premium window and lastly on a free-to-air basis (Calzada & Valetti, 2011; Eliashberg, Elberse & Leenders, 2006). This cascading chronological, often exclusive, windowing distribution system allows for studios and producers to maximise their revenue from each window of the movie distribution period. The study of maximizing revenue has been extensively covered (Calzada & Valetti, 2011; Kim, Lee & Kim, 2009; Hennig-Thurau, Henning, Sattler, Eggers & Houston, 2007) and there is general agreement that multiple versions for each window period are beneficial for revenue.

The optimal use of movie distribution channels as well as the shrinking movie distribution windows has also been examined (Luan & Sudhir, 2006). The studios and the remainder of the partners in the distribution chain determine the duration of each window period. In light of changing technology and consumer trends, the movie

window periods have been significantly shortened. This has allowed for the growth of VOD services because TV content is available within shorter periods of time globally (Hennig-Thirau, Henning, Sattler, Eggers & Houston, 2007). This has shifted content consumption behaviour and users are now watching more than one version of a product, over multiple devices or channels (Calzada & Valetti, 2012).

"Versioning" referred to as second price discrimination by Bhargava and Chaudry (2001), entails providing various quality versions of information goods that serve diverse markets. The costs of providing additional variations of information goods are considered to be minimal and this aids companies in meeting different value perceptions of customers (Kim, Lee & Kim, 2009).

Calzada and Valetti (2012) and Bhargava and Choudhary (2008) argued that all players within the movie industry rely on having multiple versions of a product available through several channels or across a number of devices. This allows customers to select their preferred version of content and producers and distributors (broadcasters) are then able to benefit from the different versions of the same content that is available to viewers. Furthermore, Hui, Byungjoon and Kar Yan (2007) identified the need to release as many versions as there are markets in order to maximize revenue. Essentially, profit increases with the number of versions of content available, but the marginal benefit of additional versions decreases as the number increases. Bhargava and Choudhary (2008) further argued that two versions are optimal for a monopoly firm, which negates their original work where Bhargava and Choudhary (2001) found that it was most profitable to offer only one quality of information good of a product.

2.7 Video-On-Demand Content Selection

Van den Broeck (2008) described VOD content as allowing the viewer a more personalised content experience, an *a-la carte* selection of content that they would like to view which is outside the traditional broadcasting model. The user is able to choose between a range of content including movies, series and documentaries. Together with the increasing convergence, VOD then allows users to have additional sources of video content.

2.8 Devices

Media convergence is well documented and Doyle (2013, p. 25) described convergence as a "migration towards common digital technologies across multiple industries and over production and distribution of media content". This convergence means that there is a shared used of digital technologies that were previously seen or used separately, including content format and new device use. This has spurred on development of new technology and content as well as converged devices such as mobile or personal video recorders. Roscoe (2004) described contradictory forces of convergence including divergence with content being delivered to unique new devices and technology convergence, which results in audience and content divergence.

2.8.1 Personal Video Recording

Van den Broeck *et al*. (2008) likened the use of a Personal Video Recorder (PVR) to that of a VCR. The PVR function allows members of a family to watch TV on their own time, thereby creating users who are more focused in watching the specific recorded television because they have a vested interest in it, and it also allows for house members to resolve viewing conflicts with each other. This contributes to the device being used for time-shifted viewing. The same study found that time shifted content is often consumed the same day as the original broadcast and is used to ensure that the viewers do not miss specific programmes.

Rudström, Sjölinder and Nylander (2010) affirmed that in relation to set-top-boxes, ease-of-use is always an issue and connecting different devices and installations is a paramount task. Barkhuus and Brown (2009) asserted that PVRs give users freedom from traditional linear TV with the set-top box giving viewers the ability to pause and rewind live programming.

2.8.2 Laptop as a TV Device

In their study, Rudström, Sjölinder, and Nylander (2010) found that laptops were used to watch on demand TV in 45 out of 50 households (90% of polled households) and identified consumer attitudes from three perspectives: time-shifted viewing, access at any time (VOD) and searching the TV material for quick access. Time-shifted content viewing was also reported by respondents to be a good option for being able to watch TV on their own time and access their own content. These respondents identified that laptops were used more as a device to view TV content over holidays as it provided

broader viewing options based on different content preferences across all age groups.

2.8.3 Handheld Devices and Tablets as a TV Viewing Device

Cesar and Chorianopoulos (2009) mentioned that alternative and complementary mobile devices as well as distribution methods play a role in media consumption. In a separate study, Cesar *et al.* (2009b) agreed that mobile devices allow users to be closer to their families even when viewing personalised content, as they allow for an individual to consume their own content while in the same proximity. O'Hara, Mitchell and Vorbau (2007) noted that mobile usage completely alters the way users consume content and the adoption of mobile TV viewing into everyday life; and they identified the uses of mobile devices in novel consumption behaviours, such as prior to retiring to bed which in some instances fit more conveniently with particular viewers' positions or schedules.

2.9 Device Substitutability and Device Compliments

Donders and Evens (2011) mentioned that the rise of the new multi-player environment with multiple platforms and devices are regarded as substitutes and a threat to incumbent distribution platforms. As a counter-active strategy the incumbents react with a 'TV Everywhere' strategy, which allows subscribers access to the premium content on an on-demand basis, luring customers to pay the premium and not fall into the cord-cutting phenomenon.

Cha (2013) discussed the implications of introducing a new medium into the media market and the propensity for new technology to substitute the older one; conversely there is an argument that viewers have a finite time for media and the introduction of new media means that viewers will spend less time on existing media and disregard the new medium. Cha concluded that when presented with a new platform the likelihood for use of the new video platform increases over the older platform (Cha 2013).

Abreau *et al.* (2013) outlined three types of activities which secondary screens are used for:

(i) Dual Screening, which includes any action while watching TV.

(ii) Synchronous activity, activities inspired by what is being shown on TV.

(iii) Companion experiences, including applications that are developed mostly by broadcasters and TV providers in order to enhance and improve the experience of the viewers with the content being watched.

Abreau *et al.* (2013) further mentioned that there are multiple ways that TV content is consumed, given its source, such as linear live TV or time-shifted TV with the ability to view on other devices or engage with complimentary devices. The study proposes that the influence on the consumer behaviour lies in demographics and characteristics and profiles of viewers.

2.10 Consumer Behaviour

Consumer behavior can be identified as the "study of individuals, groups, or organisations and the processes they use to select, secure, use, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts that these processes have on the consumer and society" (Perner, 2008, p.1). East, Wright and Vanhuele (2013) described consumer behaviour being affected by both external factors as well as the outcomes of the individual's decision that drives them to perform a certain function. East *et al.* 2013 examined different schools of consumer behaviour theory that impact on customers decision-making, taking into account feelings, attitudes and prior behaviour, stating that there are many factors that influence consumer decision making rationale.

2.11 Content Choice

The purpose of this study is to examine the consumer decision process for devices for TV content consumption; it is important to identify the initial content decision process that takes place. Wierenga (2006) classified the content decision process in the following stages: need recognition, search for information, evaluation of alternatives, purchase, consumption and post-consumption evaluation. Additionally consumers' content selection processes are influenced by "genre, true stories, critical reviews, word-of-mouth, country of origin, pricing strategy as well as star and director, all of which significantly impact consumers movie choice" (Gazley, Clark & Sinha, 2011, p. 584). Konana and Balasubramanian (2005) identified that movie selection processes tends to follow two streams of needs, namely hedonistic or utilitarian.

2.11.1 Content Influence On Device Choice

There are multiple benefits to watching online videos, including that of time-shifted videos. These benefits include the wide array of content and access to the time-shifted content over multiple times with no or fewer advertising breaks. The adoption of online video has developed passive viewers into active viewers who are social and share content (Jenkins, 2006; Shirky, 2008). These advancements mean that consumers now have a wider range of devices from which to choose.

2.12 Channel Choice as Device Choice

Balasubramanian *et al*. (2005) examined consumer channel choice, and defined the channel as a consumption outlet either online or offline, or for shopping experiences in an offline retail location, such as a DVD store. The works of Valentini, Montaguti and Neslin (2011) as well as Gensler, Verhoef and Böhm, (2012) in the past decade have described many different channel changes that have presented consumers with real choices in terms of channel usage. It is important to acquire a complete understanding of factors that affect consumers' channel choices across the stages of TV consumption. Previous studies (Henning-Thurau et al., 2006) suggested that channel attributes (e.g., a channel's perceived convenience or risk) and experience influence consumer's channel choices.

Channel choice characteristics are generally described as price, quality, convenience and risk (Ganesh, Reynolds, Luckett, & Pomirleanu 2010 and Verhoef, Neslin, & Vroomen 2007). Theoretical models are available within the academic literature to aid in identifying and examining factors for consumers' channel choices. These include social, economic and psychological viewpoints (Konana & Balasubramanian, 2005), as well as economic goals, desire for self-affirmation, symbolic meaning, social interaction and reliance on schemas and scripts (Balasubramanian, Raghunathan & Mahajan, 2005). Albesa (2007, p. 494) further stated that "individual attributes in channel choice, the need for privacy and social interaction along with channel attributes: knowledge and convenience of the channel" will influence the channel choice. According to Papies and Clement (2008), attitude, social influence, compatibility and past behaviour drive the decision on channel or device adoption.

2.13 Utility

Utilitarianism can be traced back to the nineteenth century and can be described as the ability to produce 'the greatest happiness' and Goodin (1995, p. 3) explained it as "the moral theory that judges the goodness of outcomes—and therefore the rightness of actions insofar as they affect outcomes—by the degree to which they secure the greatest benefit to all concerned". As far back as the 1940s, Mill (1940) acknowledged that some things have utility only from the point of being instrumental in providing future satisfaction. Rosen (2003) traced the notion of utility to an early Epicurian tradition, which flourished in modern form in the seventeenth century. Scarre (1996) examined utilitarianism as a theory of individual morality rather than a collective choice and confirmed that utilitarian actions lead to happiness in life or the satisfaction of human preferences.

Rosen (2003) further attempted to examine utilitarianism from many classical theorists and historians. In Rosen's examination of works by Hume, Helvetius, Paley, Benthan and Mills, he alluded to parallels between pleasure and pain, justice and liberty. Rosen (2003, p.23) refuted criticism of utilitarianism and maintained that an idea that is supported by contemporary utilitarians and moral philosophers can be considered to be "the best action is one that provides more happiness among the whole of mankind than an alternative action". Some of the criticism that utilitarianism has attracted as a theory is that constructs are difficult to measure and these deal with a wide variety of choices (individual and collective) and form a family of theories rather than a single theory (Rosen 2003, Scarre 1995), with Mills admonishing that utilitarian theory as 'utterly mean and groveling' and 'worthy only of a swine" (Scarre 1995).

The utility of the channel determines the probability that a viewer will choose the specific channel; the greater its' utility, the more favourable the chances that the channel will be selected (Gensler, Verhoef & Böhm, 2012). Balasubramanian, Raghunathan and Mahajan, (2005) indicated that consumers' use of a channel must be considered in relation to the desired final outcome and the requirements for using that channel.

2.14 Hedonistic Gains

Hedonism as a theory has its roots in early philosophers such as Epicurus, Bantham and Mills (Feldman 2004). Tiberius and Hall (2010, p. 213) identified hedonism as a

subjective theory, stating that a person's well-being is comprised of a "pleasant state of consciousness" and unless pleasure is being contributed towards, nothing can contribute to a persons well being. Hirschman and Holbrook (1982) referred to hedonistic consumption with relation to consumer behaviour as relating to multi-sensory, emotive and fantasy experience with a product. In hedonistic consumer consumption, according to Spangenberg, Voss and Crowley (1997, p. 237), "high interest and involvement generated by aesthetic products is strongly emphasised" which leads to the conclusion that high levels of involvement should be correlated with high levels of hedonistic responses. Spangenberg *et al*., (1997) indicated that mood and mental imagery are necessary components of any hedonistic and utilitarian constructs. Feldman (2004) described hedonism as leading consumers to a more pleasant life.

The critique of hedonism includes alleged worthlessness of pleasure without proper knowledge, difficulty in measuring pleasure and pain, as well as the concept of 'false pleasures'. Tiberius and Hall (2010) acknowledged that hedonism might be seen as elitist, as the well-being of one may mean imposing values on others against their wishes.

2.15 Measures of Hedonistic and Utilitarian Constructs

Turel, Serenko and Bontis (2010, p. 54) suggested that "consumers always distinguish between hedonistic and utilitarian values, and that their perceptions, attitudes and intentions depend on the product's nature". Additionally they stated that the choice between the two ultimately determine the product purchase. Contributing to this view Voss, Spangenberg and Grohmann (2003) maintained that hedonistic and utilitarian constructs are separate and should be evaluated as such. Turel *et al.* (2010) indicated that the consumption of hedonistic products is emotional and requires mental efforts; therefore the traditional utilitarian approach is not applicable for the evaluation of hedonistic gains.

Batra and Ahtola (1991) were one of the first researchers to develop a scale for measuring hedonistic and utilitarian values. The following scale was identified:

Table 2.1 Batra and Ahtola Utilitarian and Hedonistic values

Utilitarian:	Hedonistic:
• Valuable/Worthless	• Pleasant/Unpleasant
• Wise/Foolish	• Agreeable/Disagreeable
• Beneficial/Harmful	• Happy/Sad
• Useful/Useless	

This scale has attracted much criticism since its' publication, but it forms the basis of the theoretical framework for measuring utilitarian and hedonistic constructs (Voss, Spangenberg & Grohmann; 2003; Hirschman & Holbrook, 1982); nonetheless it is still one of the most widely used scales (Voss et al., 2003).

Hirschman and Holbrook (1982) expanded the scale to include a measure of involvement and the full list of attributes can be seen in Table 2.2 (below).

Table 2.2 Hirschman & Holbrook (1982)

Utilitarian:	Hedonistic:
• Useful/Useless	• Dull/Exciting
• Practical/Impractical	• Not Delightful/Delightful
• Necessary/Unnecessary	• Not Sensuous/Sensuous
• Functional/Not Functional	• Not Fun/Fun
• Sensible/Not Sensible	• Unpleasant/Pleasant
• Helpful/Unhelpful	• Not Funny/Funny
• Efficient/Inefficient	• Not Thrilling/Thrilling
• Effective/Ineffective	• Not Happy/Happy
• Beneficial/Harmful	• Not Playful/Playful
• Handy/Not Handy	• Enjoyable/Unenjoyable
• Unproductive/Productive	• Cheerful/Not Cheerful
• Problem Solving/Not Problem Solving	• Amusing/Not Amusing

Venkatesh, Thong and Xu (2012) examined hedonistic motivations regarding consumer choice in electronic products and expanded on the existing theory that is available for technology choice and adoption by including hedonic constructs. Hedonistic motivation was defined by Venkatesh *et al*., (2012, p. 8) as "the fun or

pleasure derived from using a technology, and it has been shown to play an important role in determining technology acceptance and use".

Hedonistic value is more fun and playful. Babin, Darden and Griffin (1994) explained that individuals achieve immediate hedonistic pleasure from their tasks. Additionally in their study, Venkatesh *et al,* (2012) concluded that hedonistic intention is a more important driver than performance.

2.16 Individual Measures

2.16.1 Pleasure

Feelings of pleasure have significant effects on consumer behaviour and can serve as a powerful predictor of satisfaction and attitude (Broekhuizen & Jager, 2004). Kulviwat, Bruner, Gordon, Kumar, Nasco, and Clark (2007) indicated that pleasure has a strong positive effect on attitude and online products; additionally Bruner and Kumar (2005) discussed that fun has a direct effect on the adoption of handheld devices.

2.16.2 Enjoyment

Van der Heijden (2004) defined enjoyment as the degree to which choosing a particular option or task, provides pleasure and joy, independent from the outcome of the decision or task. Enjoyment acts as an intrinsic motivator that directs a user to behave in a way that is pleasurable (Broekhuizen et al, 2004). Broekhuizen also indicated that consumers find more enjoyment in interactive environments than physical environments, which is aligned to having an entertainment device.

2.16.3 Entertainment

Kim and Forsythe (2007) in their study confirmed that entertainment value is a stronger motivator than benefit for interactive products. These authors defined entertainment as the degree to which fun can be derived from a specific task or option.

2.16.4 Fun

Kulviwat *et al*. (2007, p1077) described fun as "a mixture of pleasure and arousal", as a strong emotion that is produced when using a product. Chang, Chen and Liu (2009) considered fun as a critical component between users and their willingness to interact with technology. Their research also confirmed that fun was a significant determinant of

attitude towards using a product. Bruner II and Kumar (2005) aligned fun with ease of use, stating that technology that is easy to use and provides the user with a sense of mastery, which leads to it being more fun. In their study, the authors found that a feeling of fun increases a positive attitude, and has a greater chance of being chosen by viewers for consumption. The user would find a handheld device or a new device as more novel and thus more fun to use (Bruner II and Kumar, 2005).

2.16.5 Excitement

Kwon and Jain (2009) ascertained that users achieve a sense of excitement while seeking out new products. Tamir, Chiu and Gross (2007) outlined that feelings of excitement drive an individual to a feeling of rewarding themselves and positively increases adoption of new technology or technological devices.

2.16.6 Channel Familiarity and Convenience

Gensler, Verhoef and Böhm (2012) referred to convenience as perceived ease and speed with which a viewer is able to make a choice and this positively affects consumers' channel choice. Gensler *et al.* (2012) stated that initial channel choices might affect future channel choices; it is therefore important to understand how the channel choices are made.

Unni, Tseng and Pillai (2010) indicated that factors such as familiarity and convenience are important aspects of determining channel choice. Schröder and Zaharia (2008) outlined different types of convenience that customers may experience, including time convenience, and access convenience. This study focused only on access and use convenience of a device, although schedule convenience plays a primary motive for selecting on demand viewing. Albesa (2007) in his study confirmed that greater convenience and technical knowledge of a channel is correlated with a greater likelihood of that channel being used.

2.16.7 Technical Knowledge

Alba and Hutchinson (2000) were the pioneers in the research of technical knowledge within the broadcasting industry and established that expertise or technical knowledge measures are not just the accumulated experiences with a particular device or product but rather implies an increased ability in operating or using the said device. According

to their earlier work, consumer knowledge was treated as product familiarity and was regarded as a function of both familiarity and expertise.

Albesa (2007) noted a correlation between confidence in using technology and being in control. Technical knowledge can also be referred to as expertise and is related to a user's level of knowledge or skill (Monsuwé, Dellaert & De Ruyter, 2004) and limited knowledge may result in limited uptake of a channel (Albesa 2007). Papies and Clement (2008, p. 142) suggested that a "consumer's inclination to deal with technical innovations should influence his or her desire to adopt" which they confirmed in their study, adding that online content consumption is technically challenging and hinders the use and adoption of these products.

2.16.8 Familiarity

Familiarity is defined as "activity-based cognisance based on previous experience or learning" (Gefen, 2007 p. 727). Monsuwé, Dellaert and De Ruyter (2004) indicated that customers seek out products that they are familiar with and familiarity has been used as a predictor of trust (Teltzrow, Meyer & Lenz 2007). Familiarity determines how a user interacts with a device and which device they will choose (Balasubramanian, Raghunathan & Mahajan, 2005). Furthermore, familiarity leads to product expertise (Alba & Hutchinson, 1987).

Osika, Johnson and Butea (2009) and Rhee (2010) found that users use channels that are most familiar to them and Venkatesh, Thong and Xu (2012) found that with more experience and knowledge, the familiarity for using technology is more pronounced. Familiarity can act as an umbrella; the more customers are familiar with one device or product, the more likely they are to trust other products from the same brand (Doong, Wang & Foxall, 2011).

2.16.9 Comfort In Using The Device

Osika *et al.* (2009) stated that users who have a sense of comfort of using technology are more likely to incorporate it into their lives. Frambach, Roest and Krishnan (2007) suggested that users will chose the channel that they are most comfortable with and this includes ease-of-use for the user of that channel, alternatively they experience uncertainty and risk.

2.16.10 Contextual Usage

Cesar and Chorianopoulos (2009) determined that a viewer's use of a TV product is influenced by contextual situations that include the sharing of the media consumption experience; television watching is considered a shared experience. Cesar and Chorianopoulos (2009, p. 354) clearly indicated "it is not the same to watch television alone than together with other people, it is not the same to watch it at home than on the bus; such contextual situation determines not only what the viewer wants to watch, but as well which rendering device needs to be used".

Watching content alone or in a family setting is determined by contextual factors. O'Hara, Mitchell and Vorbau (2007) identified users who watch different content on different devices while being in the same vicinity. They also found that the mobility of the device allows users to claim their own time back and not to be dictated to by traditional linear TV about when and how to watch their favourite TV content.

2.16.11 Sharing With Friends And Family

Cesar and Chorianopoulos (2009) ascertained that TV viewing is a better experience when viewing socially with family members and this affects the choice of the consumption device. In a separate paper Cesar, Bulterman and Jansen (2009b) indicated a change in family media consumption behaviour, with an increase of devices such as laptops and tablets. O'Hara, Mitchell and Vorbau (2007) identified users' selection of devices based on either sharing with family or watching alone. The users under study chose to watch one piece of content alone on one device and continued to watch the same piece of content with their partners on a different device that was more easily to share with others.

2.16.12 Solitary Experience

O'Hara *et al*. (2007) noted that users tended to use mobile devices when they found themselves in solitude, especially when in a wider social context. These instances made the users appear to be purposeful and manage their own time and space by viewing time-shifted content. Additionally, users tended to withdraw in solitude with their device for privacy while consuming TV content.

2.16.13 On The Move

Cesar *et al.* (2009b) acknowledged the viewer as a mobile being with a desire to take a device and access content while on the move. O'Hara, Mitchell and Vorbau (2007) observed devices' mobility and content as a catalyst to a social context amongst a group of youths. O'Hara *et al.* (2007) identified instances where users took their pre-recorded (time-shifted) content to share with others on a mobile device in order to be able to discuss the content with their friends and family.

Cesar, Knoche, and Bulterman (2010) identified mobility within devices as an important aspect of television viewing functions, with consumers who started to view content on one device at home or office and then continued to watch the same content on a different device at a later stage.

2.17 Age Considerations On Viewing

Courtois (2012) found that as traditionally suggested, the older generations are still using the TV in the typical configuration of family gathered around the TV set. Courtois (2012) encountered that younger viewers personalise their viewing and are not dependent on the TV set and consume less linear broadcast content. The younger audience also employs the largest diversity in technology as well as combining different types of viewing (solitary and family). Venkatesh *et al.* (2012) found that age is associated with consumer technology innovativeness and younger consumers have a greater chance of seeking innovativeness and novelty.

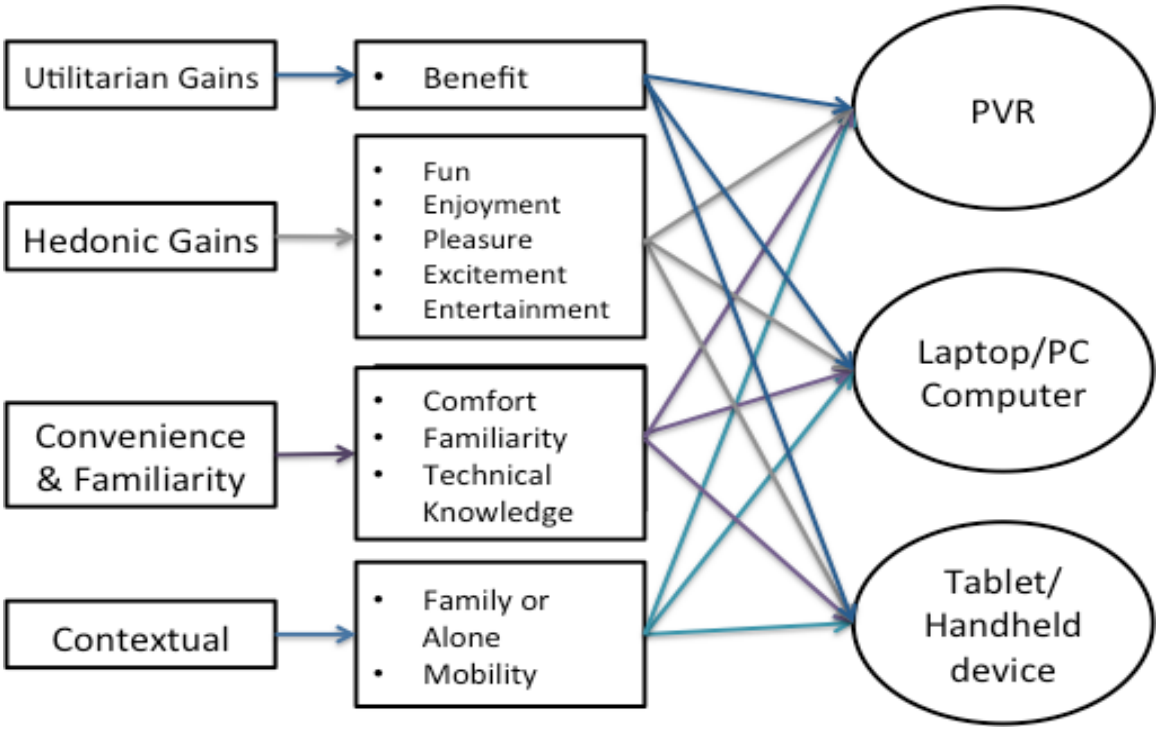
Perkins (2007) noted that older adults' attitudes towards adoption of technological products are positively influenced by their feelings of familiarity, convenience, technological knowledge; and as their levels of comfort increase so will their acceptance and willingness to adopt and use.

2.18 Towards An Integrated Research Model

The academic literature on channel and technology adoption is immense. Models such as the Technology Acceptance Model (TAM) and variations thereof are frequently used and widely criticised (Venkatesh and Bala, 2008), the most pertinent critique being a lack of hedonistic constructs that influence technology adoption and use (Koufaris, 2002). Channel choice models seek to include perceived risk, social and personal

experience, motivation, self-affirmation, economic goals, product utility, convenience, symbolic meaning (Coelho & Easingwood, 2005; Schröder & Zaharia, 2008; Balasubramanian, et al, 2005; Frambach et al. 2007; Venkatesh et al. 2012). The theory identified that makes a relevant impact on device choice within on demand TV consumption is presented in Figure 2.2.

Figure 2.2 Integrated Research Model



2.19 Conclusion

Chapter Two uncovered relevant academic literature for television and on demand content creation, device and channel choice as well consumer behaviour in relation to their selection of devices. An integrated research model was established based on existing studies that formed the basis for this study and further analysis. The foundation of this model lies in hedonistic and utilitarian gains, convenience and familiarity and contextual situations, which all have been found to have an impact on consumer choice, adoption and use of devices.

Chapter Three outlines propositions that have been uncovered by the existing literature and Chapter four establishes the research methodology that was followed for the purposes of this study.

CHAPTER 3: RESEARCH PROPOSITIONS

This chapter outlines a number of propositions that have been identified in the literature review from Chapter Two. Lewis and Saunders (2012, p191) identified a proposition as "an assertion that something is true that can be tested using the data available". The following propositions form the basis of this study and the discussion of the results that follow in Chapter Six.

The following research propositions arose from the literature review:

3.1 Proposition One: Utilitarian Gains

1. The higher the rating of the channel for being beneficial to watch VOD, the greater the probability of choosing that channel.

Consumers will choose the channel that provides them with the largest utilitarian gains (Konana & Balasubramanian, 2005; Voss, Spangenberg & Grohmann, 2003; Hirschman & Holbrook, 1982). Utilitarianism has many variables and for the purposes of this study, benefit was identified as the most relevant utilitarian measure when it comes to technological products and channels. Venkatesh, Thong, and Xu (2012) mentioned utility benefits from widespread usage and described utility as usefulness and satisfaction, and that the end result of utilitarianism adds the most benefit to the consumer.

3.2 Proposition Two: Hedonistic Gains

1. The higher the rating of the channel for being fun to watch VOD, the greater the probability of choosing that channel.

2. The higher the rating of the channel for being enjoyable to watch VOD, the greater the probability of choosing that channel.

3. The higher the rating of the channel for being pleasurable to watch VOD, the greater the probability of choosing that channel.

4. The higher the rating of the channel as being exciting to watch VOD, the greater the probability of choosing that channel.

5. The higher the rating of the channel for being entertaining to watch VOD, the greater the probability of choosing that channel.

Experiencing pleasure, excitement and fun influences the channel choice made by consumers (Konana & Balasubramanian, 2005). Venkatesh, Thong, and Xu (2012) defined hedonistic motivation as fun or pleasure that is elicited by the use of technology and has been shown to be an important factor in determining technology adoption and use. Venkatesh *et al*. (2012) further proposed that entertaining technology is better adopted for use. The number of hedonistic variables to be tested was limited to the ones above, based on literature and on the nature of the entertainment media content that is consumed on TV viewing devices.

3.3 Proposition Three: Channel Familiarity and Convenience

1. The higher the rating of the channel for being comfortable to watch VOD, the greater the probability of choosing that channel.

2. The higher the rating of the channel for familiarity to watch VOD, the greater the probability of choosing that channel.

3. The higher the rating of the channel for technical knowledge to watch VOD, the greater the probability of choosing that channel.

Albesa (2007, p. 497) advocated "The ability to use a channel is a determining variable for its use. Although all clients feel comfortable with the conventional methods based on personal contact, the channels based on technology present more difficulties"**.** Channel choice is determined by consumers' operational knowledge of that channel. Additionally, consumers' perceived convenience of the channel correlates with usage probability. Papies and Clement (2008) asserted that consumers' inclination to deal with technical innovations influences his or her desire to adopt the device and the channel.

3.4 Proposition Four: Contextual Situations

1. The higher the rating of the channel for watching VOD alone, the greater the probability of choosing that channel.

2. The higher the rating of the channel for watching VOD with friends or family, the greater the probability of choosing that channel.

3. The higher the rating of the channel for watching VOD while travelling or mobile, the greater the probability of choosing that channel.

Contextual situations or whether the user is alone or in a family setting influences the choice of channel or device (Cesar & Chorianopoulos, 2009). Consumer mobility at the time of consumption influences consumption choice (Montpetit, Klym & Mirlacher, 2011), with many consumers choosing to watch their favourite shows on the move. Cesar *et al.* (2010) identified mobility within devices as an important aspect of television viewing functions.

3.5 Conclusion

Chapter Three outlined four proposition categories that have been derived from the review of academic literature provided in Chapter Two. These propositions describe utilitarian and hedonistic gains, familiarity and convenience as well contextual situations that have an effect on users' channel and device choices. Identified literature was included for these propositions and supporting statements. Chapter Four provides a description of how these propositions were measured within the selected population in this research study.

CHAPTER 4: RESEARCH METHODOLOGY

This chapter outlines and clarifies the research methodology and design, including the provision of details on the population, the unit of analysis, the sampling method and size, as well as details of the data gathering process and analysis. The chapter concludes with particular limitations outlined by this research, and introduces opportunities for future research as well as considerations for addressing the limitations mentioned.

4.1 Introduction

A quantitative study was designed and disseminated amongst a sample of South African pay-tv users who have access to VOD services and consume this service over multiple devices. To ensure relevance, only users who have accessed and used VOD services over multiple platforms were used for the study. The objective of the study was to identify how consumers make their choice between technology platforms to watch on demand TV content. This study is descriptive in nature, which is focused on the opinions and behaviour of respondents in relation to their choice of on demand TV consumption (Lewis & Saunders, 2012).

4.2 Research Design

The research methodology was based on a quantitative survey that was conducted amongst VOD users. This service is available to the top tier of customers and is available across PVR set top boxes, PCs and mobile handheld devices, such as tablets.

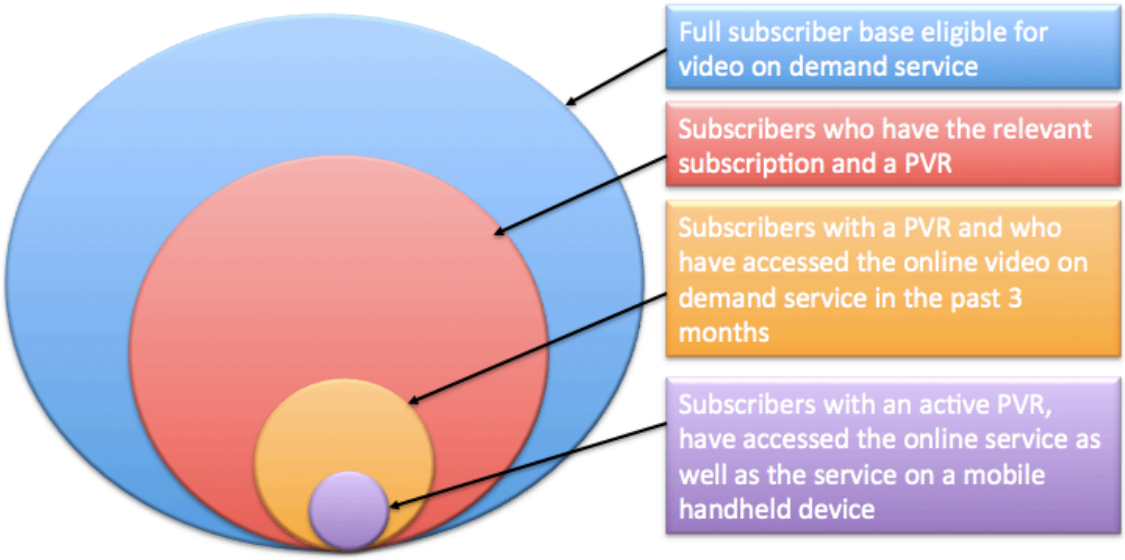
4.3 Population

Weiers (2008) described the population or the universe as the entire set of people or objects of interest and a sample as a smaller subset of the people or objects that exist within the larger population. The population of this study consisted of viewers that have access and have made use of on demand content across multiple devices.

As active users of on demand services, these respondents were are best suited to answer the questionnaire. These respondents exhibited different demographical characteristics and were from different parts of South Africa. A critical component of the on demand service is accessed online; therefore an online survey was thought to be an optimum way to reach the required audience.

Figure 4.1 illustrates a graphical representation of the defined population within the broader context of all possible top tier satellite TV subscribers. The figure describes the different levels of subscribers that are available and is representative of the user base of consumers and the population that was used for this research.

Figure 4.1 Overview of defined population for this study



4.4 Unit of Analysis

Yin (2009) referred to a unit of analysis as the phenomenon that is being observed within a specific context. The unit of analysis in this study was the subscriber that completed the questionnaire, whereas each response is considered an individual data source.

4.5 Sampling Method and Size

The sample is set to have the same characteristics as the population from which they were selected (Lewis & Saunders, 2012). In this study the total population consists of all subscribers that are legible for video-on-demand services regardless of the platform.

According to the latest published figures of the pay-tv operator (Naspers), 1,47 million South African viewers are subscribers to the top tier package which allows full access to the on demand content.

The sample was drawn from all consumers who receive electronic newsletters from the pay-tv operator; the sample was chosen based on convenience. Given that the newsletter readers have online access and are on the top tier package there was a high likelihood that they also make use of the on demand platforms.

All top tier satellite TV subscribers are eligible to access a VOD service; however not all of them would be eligible for this study as only consumers who have accessed these platforms and made use of the service on all three devices were polled. Due to the nature of the set-top-boxes, there was no way to isolate consumers who access the on demand content on their PVRs. In order for viewers to access the PC or the mobile service, they have to have a top tier subscription.

There are approximately 5 000 registered VOD viewers (company data) that make use of the PC and handheld device platforms for watching on demand TV. This reduced the overall eligible population size, as only consumers that had made active use of the VOD platforms were able to answer the questionnaire.

4.6 Data Collection Tool

In order to identify the target sample group, top tier subscribers who had met the requirements of having access and use of online and PVR on demand platforms were identified. The target sample group then received an electronic newsletter, which was specifically tailored to them and included an invitation to participate in this study. No remuneration or incentives were offered to the respondents. The online questionnaire was hosted by smartsurvey.co.uk and could only have been accessed by users with a direct web-link.

The advantage of using an online questionnaire ensures that the data was captured directly into a database, limiting any human error in capturing and allowed for an easier way to export the data. This was also a convenient method for respondents to complete the questionnaire in their own time, as they could return to it at their convenience. A copy of the questionnaire is included in Appendix A.

4.7 Measurement

The propositions chosen for this study were identified from the review of academic literature and are rooted in existing theory. Statements were formulated that aim to measure respondents' attitudes towards a particular construct. These statements were measured using a five-point Likert-type scale to evaluate each device based on their experience. Researchers frequently use a scale with statements that are closely related to measure a construct (Babbie, 2012). Leedy and Omrod (2010) referred to a construct as a variable that is not always directly observable but exists based on a pattern of behaviour. Pallant (2013) noted that Likert-type scales allow for a range of scores and increases the amount of statistical analysis that is available to the researcher.

Responses were assigned a numerical value to allow for a positive relationship to be established, with a higher score indicating an affirmative agreement. In order to receive a measure for each construct, the answers were summated and divided by the number of items in the scale.

The categories assigned on the five-point scale were the following:

1= Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

It can be argued that the benefits of using a Likert-type scale outweigh the negative, nonetheless the following needed to be considered:

1. The Likert scale does not illustrate the degree of negative or positive emotion; one can only examine whether the respondents have a positive or a negative attitude towards behaviour.
2. There is a possibility that respondents may answer what they feel they should answer and not what they truly feel (Kothari, 2009). This is also known as response bias (Kumar, 2008).

The nature of the research was such that the degree of positive or negative emotion did not need to be considered. In order to avoid and minimize response bias, respondents were encouraged to answer truthfully and honestly and it was carefully explained that there were no right or wrong answers.

4.8 Data Analysis

Given the use of a Likert-type scale, the questionnaire yielded quantitative and ordinal data that was collected for analysis. The responses were analysed using descriptive statistics, including proportions, means and standard deviation (Pallant, 2013). To further investigate the variation in the data, analysis also included Cronbach's alpha. Correlation analysis and regression were also tested to examine the variation underlying the constructs in the proposition. Further clarification regarding statistical analysis used is presented in sections 4.8.2, 4.8.3 and 4.8.4.

4.8.1 Validity and Reliability

Validity and reliability are fundamental in evaluation and measurement instruments, such as general knowledge, skills or attitudes or survey questionnaires. Validity is concerned with the extent to which an instrument or a scale measures what it is intended to measure, whereas reliability is attributed to the degree to which an instrument is able to measure consistently (Tavakol & Dennick, 2011). Furthermore Tavakol and Dennick (2011, p. 53) stated "an instrument can not be valid unless it is reliable", and "reliability of an instrument does not depend on its validity".

Validity can be addressed through a number of items. In order to ensure construct validity of the results, propositions were grounded in theoretical literature. In order to address face validity, the instrument was evaluated by a number of researchers and the supervisor. Cronbach's alpha was used to test for internal consistency reliability.

4.8.2 Cronbach's Alpha

Cronbach (1951) asserted that "any research based on measurement must be concerned with the accuracy or dependability or, as we usually call it, reliability of measurement". Further motivation was provided by Sijtsma (2009), who stated "no other statistic has been reported more often as a quality indicator of test scores than Cronbach's alpha coefficient". Cronbach's alpha is widely believed to be a reliability

estimate and is used as a measure of internal consistency (Sijtsma 2009). Tavakoland Dennick (2011) explained that Cronbach's alpha provides the researcher with a measure of internal consistency of a test and is illustrated as a number with a value between 0 and 1. Internal consistency depicts the degree to which all items inside a test measure the same construct or concept.

Three of the four propositions were constructed with multiple statements, and Cronbach's alpha was used to determine internal consistency within the proposition against its aggregate. Pallant (2013) advised that Cronbach's alpha coefficient should be above 0,7 to indicate all statements measuring the same construct. This study measures a number of propositions, not all of them with multiple statements and thus not every proposition used Cronbach's alpha to test for internal consistency.

4.8.3 Correlation Analysis

Pearson correlation was run on the collected data as it was deemed to be better suited for testing correlations for non-parametric data. Listwise exclusion on missing values was adhered to; according to Pallant (2013) listwise is used to remove the data for the variables and the case is completely excluded from all analysis conducted. Pearson correlation analysis measures the strength of the linear relationship between two scales or continuous variables (Weirs, 2008), whereas regression analysis provides a best-fit linear equation for the data (Weirs, 2008). Both methods were used to examine and explain the identification of variables that have explanatory value.

Two important measures of strength were examined, the coefficient of correlation (*r*) and the coefficient of determination (*R Square*). The coefficient of correlation should be no less than $r = -1$ and no greater than $r = +1$ with the greater the value of *r* the stronger the linear relationship between the variables.

4.8.4 Regression Analysis

Regression Analysis was carried out to test for significance on each of the statements. Weirs (2008, p. 552) explained that regression analysis "provides a best-fit mathematical equation for the values of the two variables". An identified limitation of regression analysis is confusion that the two variables are explicitly caused or influenced by each other. These variables may be influenced by other data points that may not be part of the study (Weirs 2008).

4.9 Limitations Of Methodology

The sampling technique should ideally be probability sampling to ensure generalization to the population (Saunders & Lewis, 2012). A pilot study would have been beneficial and would have allowed for the researcher to evaluate the instrument in testing the constructs and the proposition. Sample size affects generalisability (Pallant, 2013), and with a smaller sample results may not be generalisable with other samples. Pallant (2013) offered a formula to calculate an optimal sample size but admitted that for social research 15 subjects "per predictor are needed for a reliable equation".

Likert-type scales produce ordinal data and the intervals between the scales are not all the same and cannot be interpreted as such, which means that the mean and the standard deviation are inappropriate for ordinal data (Jamieson, 2004). To address this limitation, non-parametric tests were conducted and ratios and proportions were reported on.

There may have been false answers due to participants not wanting to take the time to complete the questionnaire. Subject bias is worth mentioning as the responders may have allocated a stronger like or dislike based on what they felt was the right answer and not a true reflection of their attitudes. The same study may be interpreted in a different way and the use of different descriptive statistics may have been employed to test for other findings.

It is widely regarded that designing a questionnaire is an art form (Pallant, 2013) and the wording of the questionnaire and the users' understanding of the statements may have influenced the study. Careful consideration was given to the questionnaire design and propositions to minimize these limitations.

4.10 Conclusion

This chapter depicted the research methodology that the study followed. Both the population and the sample were outlined. Descriptive statistics discussed and were used together with further analysis for correlation and variance. Limitations of the methodology were addressed and outlined. Chapter Five outlines the results of this study.

CHAPTER 5: RESULTS

The results of the electronic questionnaire collected are presented in this chapter of the research report. The aim of this section is to collate the data gathered to test the research propositions outlined in Chapter Three with limited analysis provided. Descriptive statistics are incorporated in line with the quantitative nature of the research.

5.1 Sample Characteristics

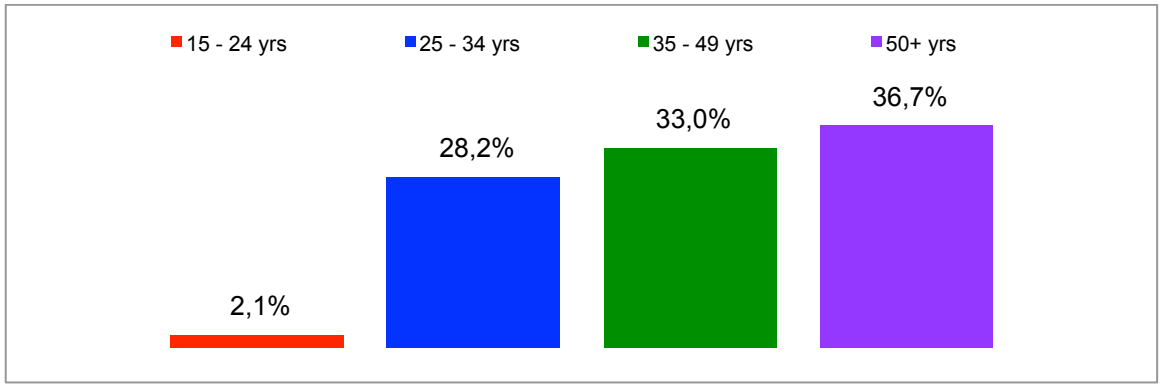
Sample characteristics describe the age profile, access to the devices and use of the devices of the respondents.

The online questionnaire was started by 463 respondents, partially completed by 273 respondents, which were discarded in favour of 188 completed online questionnaires.

5.1.1 Age Group Distribution

The largest group of respondents (36,7%) was over 50 years of age (see Figure 5.1). This was followed by the 35 to 49 year old age group, which made up 33,0%, and was then followed by the 25 to 34 year old age group, which constituted 28,2%. Only four respondents were below the age of 24 (2,1%). This distribution is reflective of the expected age distribution of the top-tier subscribers as they tend to belong to a higher income bracket and higher LSM group and are therefore more likely to subscribe to the top tier bracket.

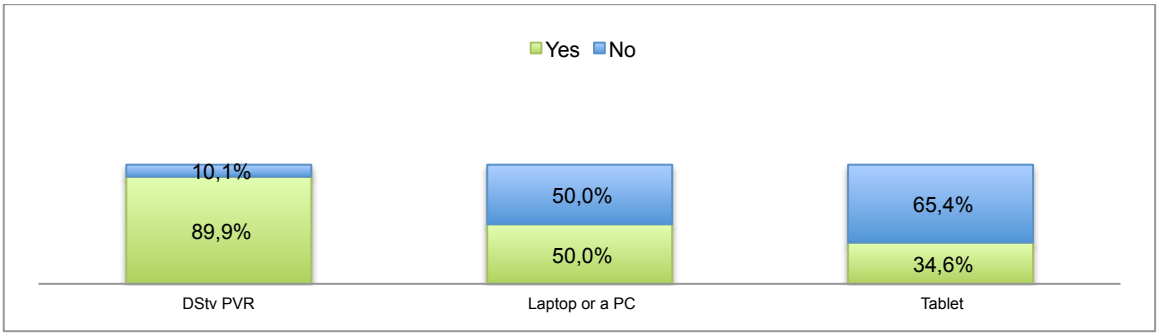
Figure 5.1 Sample Distribution By Age Group



5.1.2 Access To The Device

Out of 188 respondents, 89.9% had access to the PVR with a further 60% of consumers making use of the device, with only 10,1% that had no access or use of the PVR. In addition, 50% of the users reported having access to the video-on-demand services on a laptop computer, while 34,6% of the users reported having access to the content on a tablet device. Some respondents indicated that they used multiple devices, however they evaluated each device separately in the electronic questionnaire.

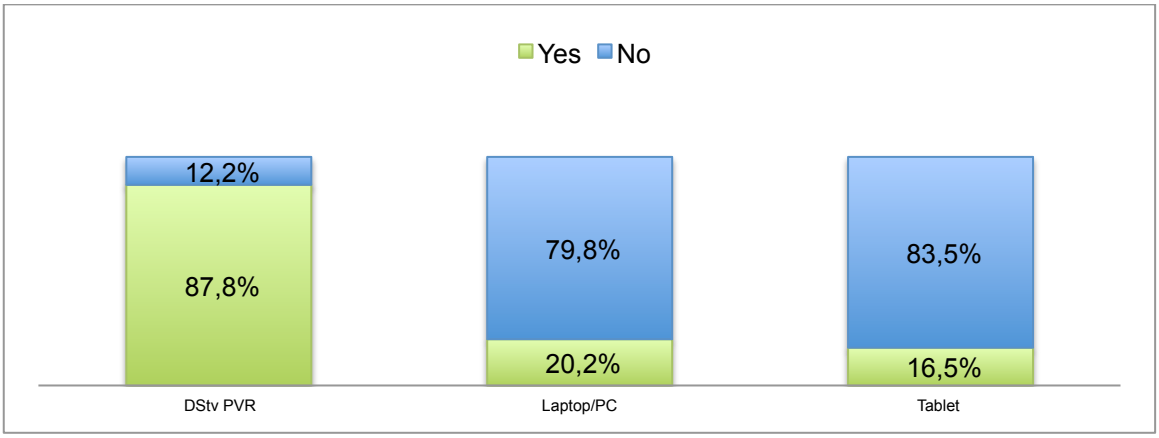
Figure 5.2 Access To The Device



5.1.3 Usage Of The Device

In the last three months, 87,8% of the sample had made use of the VOD content on the PVR with numbers dropping significantly for laptop computers and the tablet usage with 20,2% and 16,5% respectively. As expected, while respondents have access to the devices they do not always make consistent use of them. It is worth noting that the PVR usage group is by far the largest group out of the three devices, which correlates with technology adoption in the age brackets of the respondents (Courtois, 2012).

Figure 5.3 Usage Of The Device

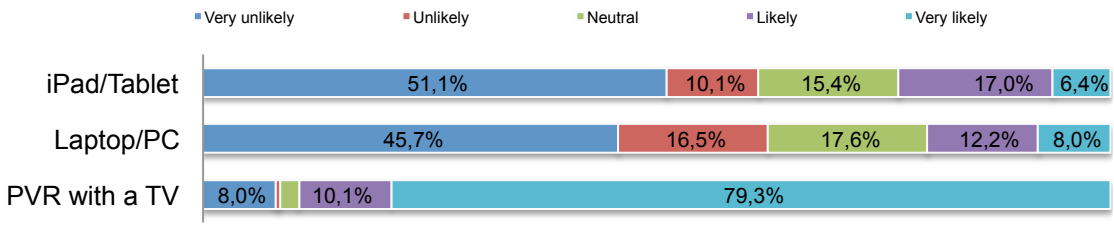


5.2 Results pertaining to propositions

5.2.1 Likelihood Of Choosing A Device

The questionnaire was structured to include a question that would allow the consumers to validate their responses concerning their selection and the likelihood of them choosing a particular device in the future. The question was presented separately in the survey and made use of a five point Likert-type scale to allow for correlations to be drawn during the analysis phase.

Figure 5.4 Likelihood Of Choosing A Device



	PVR with a TV	Laptop/PC	iPad/Tablet
Very unlikely	8,0%	45,7%	51,1%
Unlikely	0,5%	16,5%	10,1%
Neutral	2,1%	17,6%	15,4%
Likely	10,1%	12,2%	17,0%
Very likely	79,3%	8,0%	6,4%

There were many consumers who selected ‘very likely’ for their decision of using PVR as a device to watch VOD in the future. Tablets were the least likely to be chosen, with 51,1% of respondents stating ‘very unlikely’ and laptop/PCs were also unpopular with 45,7% of respondents stating that they were ‘very unlikely’ to chose this platform in the future. Overall it is evident from Figure 5.2.1 that PVR was the most frequently chosen device within this group.

The question about the future likelihood of choosing a device forms the basis of this research against which all subsequent propositions were evaluated.

5.3 Proposition One: Utilitarian Gains

The first proposition was related to the benefit or utilitarian gains that a respondent would retrieve from watching on demand content on a particular device and is stated as follows:

The higher the rating of the channel for being beneficial to watch VOD, the greater the probability of choosing that channel.

Benefits from watching VOD on PVR were recorded by 52,4% of the respondents who strongly agreed to the statement. This differed strongly to laptop computers and tablets, with 32,6% of Laptop/PC and 31,4% tablet respondents selecting 'neutral' in response to the statement.

Figure 5.5 Benefit From Watching On Demand On PVR

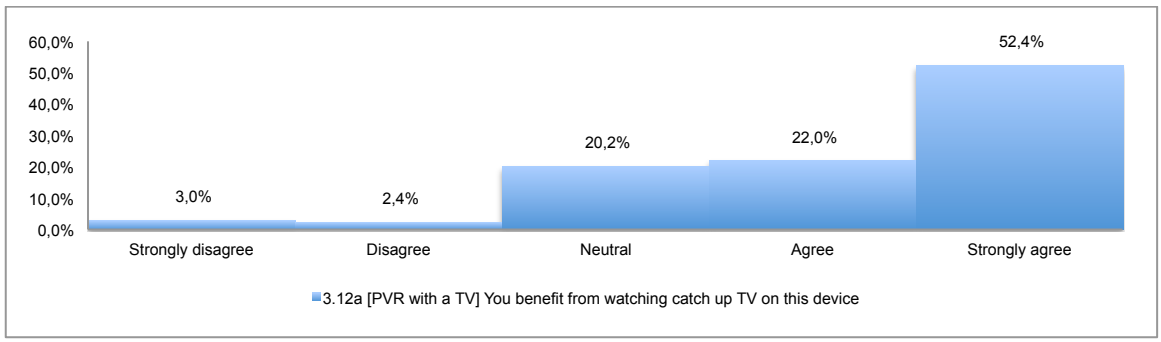


Figure 5.6 Benefit From Watching On Demand On Laptop/PC

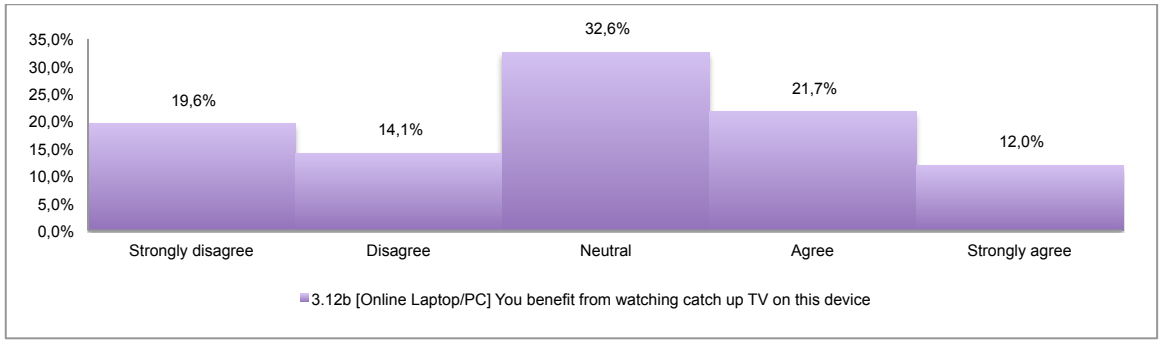
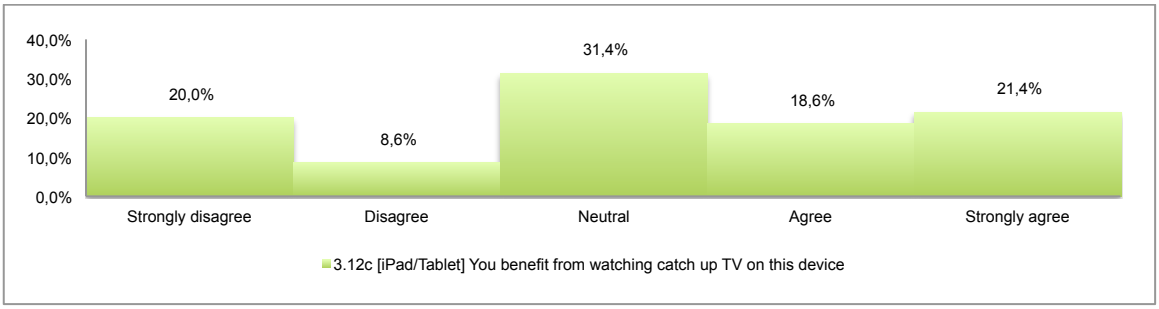


Figure 5.7 Benefit From Watching On Demand On Tablet



5.3.1 Proposition One Correlation Analysis

The proposition was focused on consumers making a selection for a particular device and their positive or negative interaction with the statements that were presented to them in the electronic survey. In order to analyse this relationship, correlation analysis was conducted. Pearson correlation across the three devices showed no statistical significance, suggesting no linear relationship or significant correlation as the significance level was higher than 0,05 (p>0,05). There was no recorded relationship between benefit of watching on demand TV on a device and the likelihood of choosing that device.

Table 5.1 Proposition One Correlation Analysis:

Would Choose This Device				
		PVR	Laptop	Tablet
You benefit from watching catch up on this device	Pearson Correlation	,071	,287	,294
	Sig. (2-tailed)	,366	,095	,146
	n	162	35	26

As there was no statistical significant relationship found, the null hypothesis was rejected and no further analysis was conducted on this proposition. Therefore the results did not provide evidence to support the proposition.

5.4 Proposition Two: Hedonistic Gains

The second proposition aggregated a number of statements composing the hedonistic constructs. The following five statements were identified:

1. The higher the rating of the channel for being fun to watch VOD, the greater the probability of choosing that channel.

2. The higher the rating of the channel for being enjoyable to watch VOD, the greater the probability of choosing that channel.

3. The higher the rating of the channel for being pleasurable to watch VOD, the greater the probability of choosing that channel.

4. The higher the rating of the channel as being exciting to watch VOD, the greater the probability of choosing that channel.

5. The higher the rating of the channel for being entertaining to watch VOD, the greater the probability of choosing that channel.

5.4.1 Proposition Two Cronbach's Alpha

Initially, Cronbach's alpha was used to test internal consistency and reliability between the five statements across the three devices. The results are summarised in Table 5.2 and show that Cronbach's alpha is over the recommended 0,7 across all three devices and all five statements. The individual Cronbach's alpha values across three devices are presented in Table 5.3, suggesting that the value indicates a reliable measure of the construct.

Table 5.2 Proposition Two Cronbach's Alpha

Platform	Number of Items	Cronbach's Alpha
PVR	5	0,876
Laptop	5	0,932
Tablet	5	0,949

The following tables represent individual Cronbach's alpha values across the three devices:

Table 5.3 Proposition Two Cronbach's Alpha Across Devices

	Cronbach's Alpha if Item Deleted: PVR	Cronbach's Alpha if Item Deleted: Laptop	Cronbach's Alpha if Item Deleted: Tablet
1. Watching VOD content on this device is fun	0,840	0,920	0,932
2. Watching VOD content on this device is enjoyable	0,829	0,904	0,941
3. Watching VOD content on this device is pleasurable	0,833	0,895	0,939
4. You feel that its more exciting to watch content on this device	0,906	0,926	0,944
5 Watching VOD content on this device is entertaining	0,846	0,934	0,928

Once consistency between the constructs had been established, correlation analysis was conducted on the responses. Individual and summarised values are presented in Table 5.4. Noteworthy correlations include statements 2, 3 and 4 that are related to *pleasure*. On closer examination of responses for laptop VOD was of statistical significance as there is a correlations greater than 0,5 that can be observed with significance level that is less than 0,05. Similarly there is a statistically significant correlation to statement 4 (excitement) and tablet use. Pallant (2013) provides a guideline with r=0,1 – 0,29 having a small relationship, r=0.39 – 0,49 having a medium relationship and r=0,5-1 as having a strong relationship.

Table 5.4 Proposition Two Correlation Analysis Across Device And Constructs

		Would choose: PVR with a TV	Would choose: Online Laptop/PC	Would choose: iPad/Tablet
Would choose: PVR with a TV	Pearson Correlation	1	1	1
	Sig. (2-tailed)			
	n	165	38	31
1. Watching catch up content on this device is fun	Pearson Correlation	0,071	0,265	0,181
	Sig. (2-tailed)	0,372	0,124	0,376
	n	161	35	26
2. Watching catch up content on this device is enjoyable	Pearson Correlation	0,121	**0,404**	0,315
	Sig. (2-tailed)	0,126	0,016	0,117
	n	162	35	26
3. Watching catch up content on this device is pleasurable	Pearson Correlation	0,088	**0,559**	0,199
	Sig. (2-tailed)	0,268	0,000	0,330
	n	162	35	26
4. You feel that its more exciting to watch content on this device	Pearson Correlation	0,100	**0,560**	**0,391**
	Sig. (2-tailed)	0,203	0,000	0,049
	n	162	35	26
5. Watching catch up content on this device is entertaining	Pearson Correlation	0,073	0,231	0,360
	Sig. (2-tailed)	0,359	0,181	0,071
	n	162	35	26
Summation of Hedonistic statements	Pearson Correlation	0,109	**0,466**	0,317
	Sig. (2-tailed)	0,167	0,005	0,114
	N	162	35	26

However, these five items provide underlying measurements for an overall hedonistic construct.

There is no overall evidence for PVR and tablet use, but there is a correlation with hedonistic gains as a construct for laptop/PC use. This warrants further investigation and a regression analysis is presented in Table 5.6

Table 5.5 presents the analysis of variance for laptop use and the null hypothesis that this is a statistically insignificant model is rejected on the basis that $p<0,05$ at a $p<0,001$.

Table 5.5 ANOVA Table Summated Hedonistic Gains: Laptop Use

	Sum of Squares	df	Mean Square	F	Sig.
Regression	25,752	5	5,150	5,569	0,001
Residual	26,819	29	0,925		
Total	52,571	34			

These results are further supported by the regression analysis with only the entertainment construct yielding a significance value that is higher than 0,05. The only hedonistic value that yielded significance is pleasure with a *p* value of p<0,05.

Table 5.6 Proposition Two Regression Analysis Laptop Use

	Unstandardised Coefficients		Standardised Coefficients			Correlations		
	B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
(Constant)	2,709	0,651		4,161	0,000			
Watching catch up content on this device is fun	-0,514	0,274	-0,432	-1,876	0,071	0,265	-0,329	-0,249
Watching catch up content on this device is enjoyable	-0,471	0,332	-0,433	-1,416	0,167	0,404	-0,254	-0,188
Watching catch up content on this device is pleasurable	1,104	0,377	1,063	2,932	**0,007**	0,559	0,478	0,389
You feel that its more exciting to watch content on this device	0,353	0,233	0,387	1,516	0,140	0,560	0,271	0,201
Watching catch up content on this device is entertaining	-0,153	0,240	-0,136	-0,637	0,529	0,231	-0,117	-0,084

Analysis on residuals was conducted and can be viewed in Appendix B. There were no meaningful details found within residuals that would contribute for the purposes of this study for proposition two. There is enough evidence to partially support proposition two with the overall hedonistic construct for laptop/pc use and likelihood of choosing that device in the future. Additionally, enjoyment, pleasure and excitement of laptop computer use were shown to have a statistically significant correlation. Excitement for tablet use was also seen to have an impact.

5.4.2 User responses to individual Hedonistic statements

5.4.2.1 Fun

When rating *fun*, 64,7% of users strongly agreed that watching VOD content via PVR was perceived as being fun. Respondents for the laptop (37,6%) and tablet (31,9%) indicated a neutral position in relation to the device and fun.

Figure 5.8 Watching VOD Content On PVR Is Fun

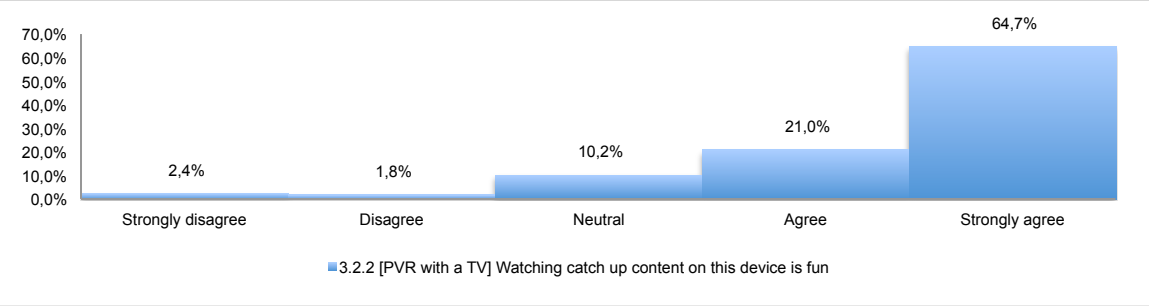


Figure 5.9 Watching VOD Content On Laptop Is Fun

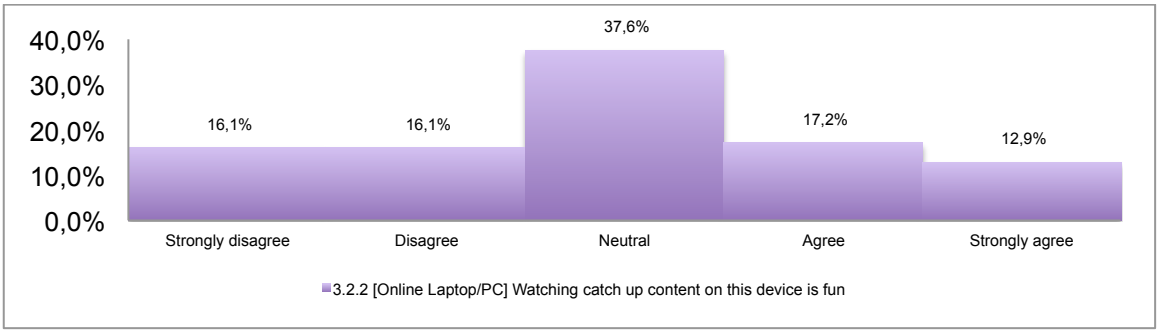
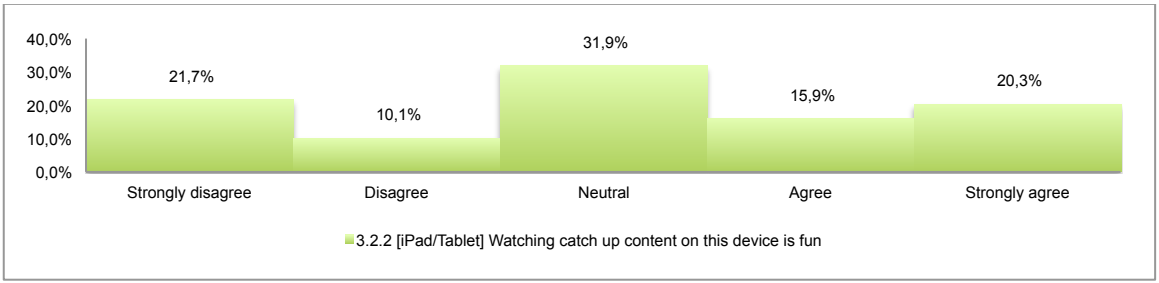


Figure 5.10 Watching VOD Content On Tablet Is Fun



5.4.2.2 Pleasure

The majority of respondents (60,1%) indicated that it is pleasurable to watch on demand content via PVR. Laptop use was rated lower with 35,2% of respondents indicating that they were neutral to the statement and only 11,0% indicating that they

strongly agree. There was a wider range of consumers who had almost equally 'strongly agree' (23,5%) and "strongly disagree" (22,1%) with the statement.

Figure 5.11 Watching VOD Content On PVR Is Pleasurable

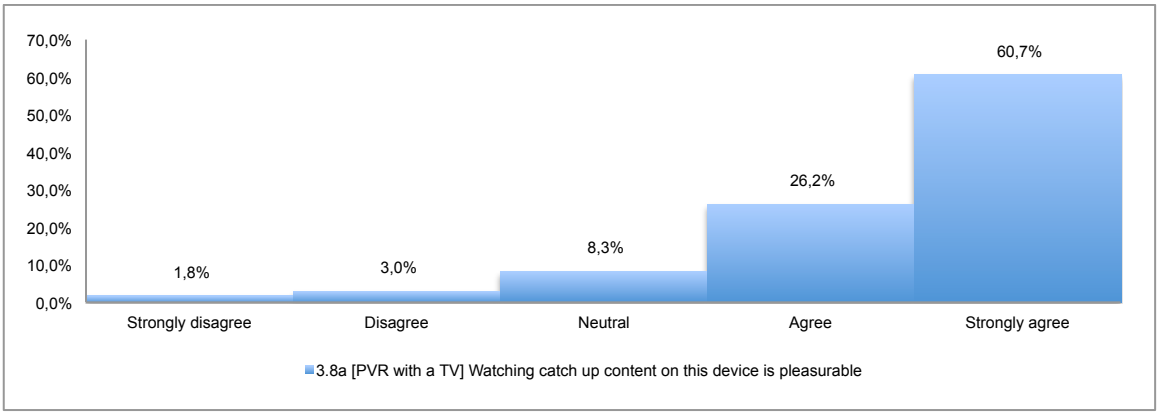


Figure 5.12 Watching VOD Content On Laptop Is Pleasurable

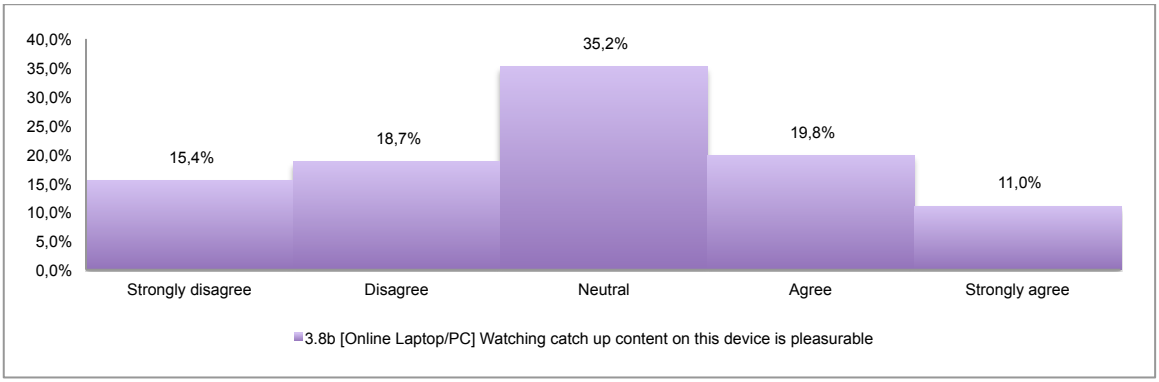
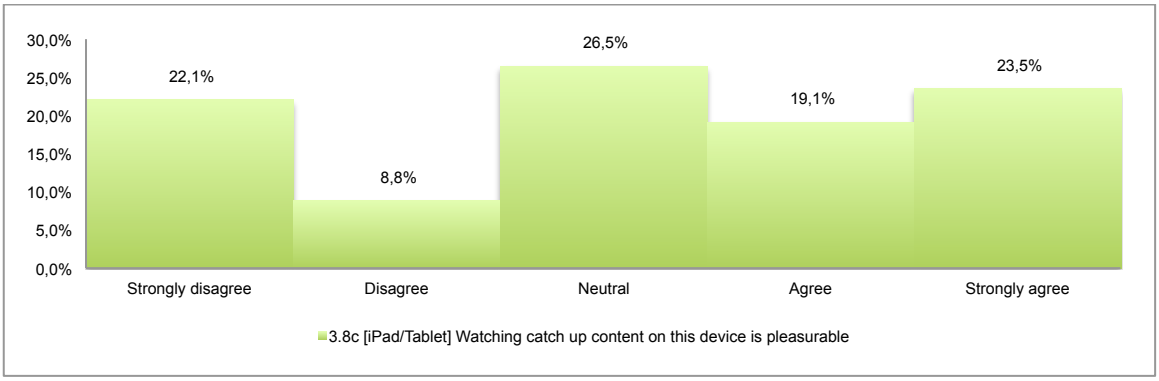


Figure 5.13 Watching VOD Content On Tablet Is Pleasurable



5.4.2.3 Enjoyment

Similarly to the notion of *fun*, *enjoyment* as a construct saw similar response patterns. The majority of the respondents (64,3%) indicated that they strongly agree that watching VOD content on the PVR was enjoyable with 35,2% respondents indicating

their feelings as neutral when associated with enjoyment and the laptop as a device to consume VOD content. There is a slight decrease in neutral responses regarding watching content on tablet devices, with 29,4% of respondents indicating neutral. Combined figures for 'agree' and "strongly agree" are positioned at 38,2%, which indicated that there is a stronger enjoyment of consuming on demand content on handheld devices. The consumers once again were divided regarding their like or dislike of the platform with 22,1% selecting 'strongly disagree' and 20,6% selecting 'strongly agree'.

Figure 5.14 Watching VOD Content On PVR Is Enjoyable

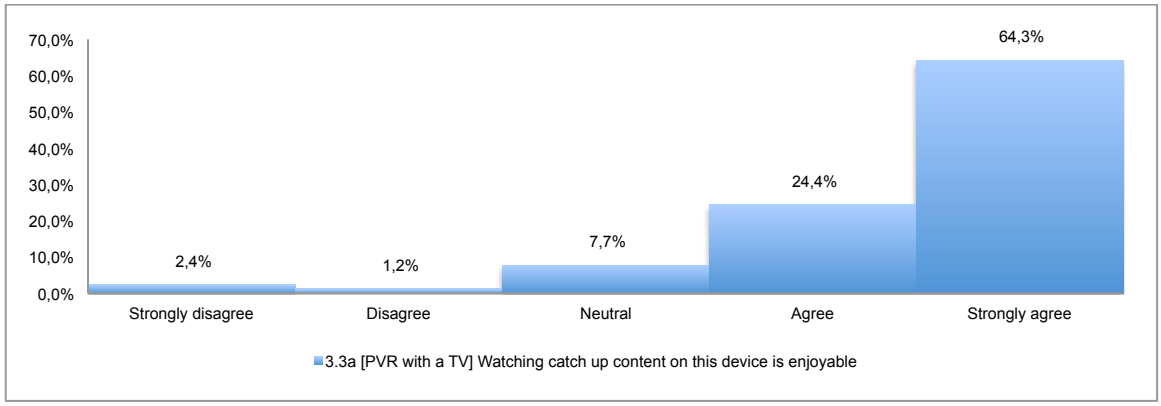


Figure 5.15 Watching VOD Content On Laptop Is Enjoyable

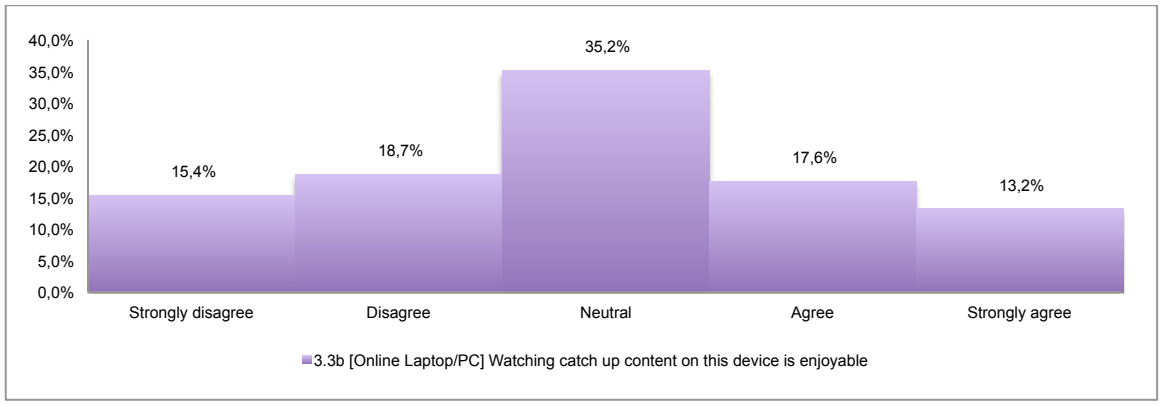
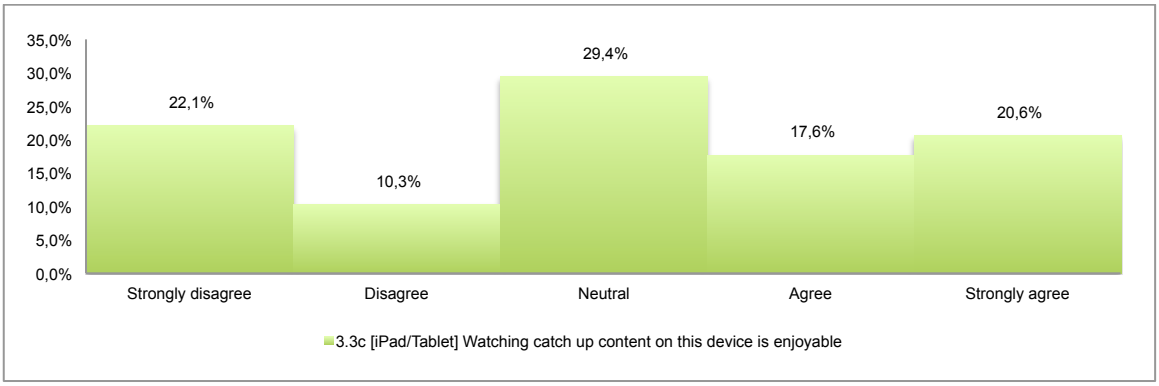


Figure 5.16 Watching VOD Content On Tablet Is Enjoyable



5.4.2.4 Excitement

'Strongly agree' responses for excitement as a value for using PVRs was notably higher 47,6% than that for laptops or tablets, which had a strong preference for neutral responses and 'strongly disagree'. Thirty seven percent of the respondents responded as 'neutral' and 26,1% as 'strongly disagree' when they ranked watching on demand content on laptops and 34,3% were rated as 'neutral' and 27,1% were rated as 'strongly disagree' in their responses to watching on demand content on tablets, constituting the majority of respondents ranking laptops and tablets as either neutral or least associated with excitement.

At face value, these responses differ to the correlations that have demonstrated a relationship between device choice and hedonistic gains. Excitement together with pleasure and enjoyment showed a statistically significant correlation between the statement and the likelihood of choosing the device.

Figure 5.17 Watching VOD Content On PVR Is Exciting

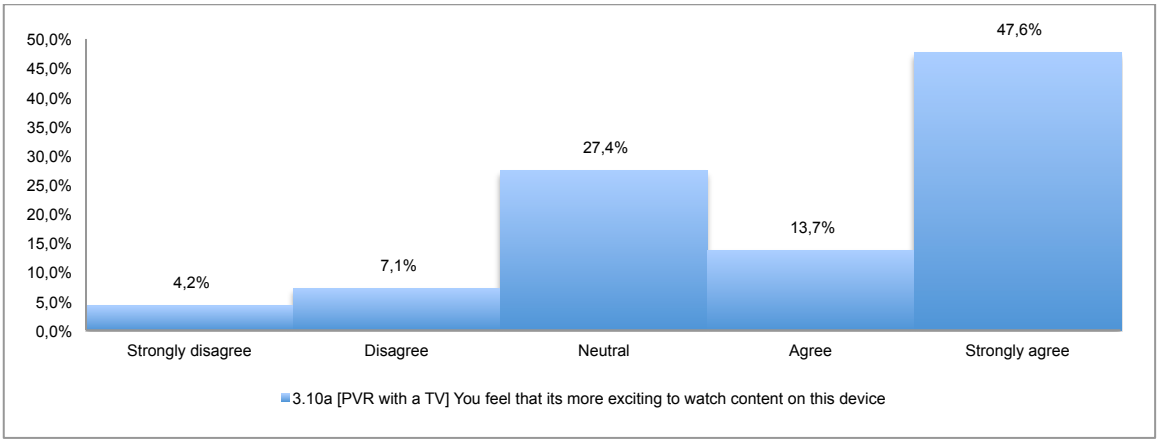


Figure 5.18 Watching VOD Content On Laptop Is Exciting

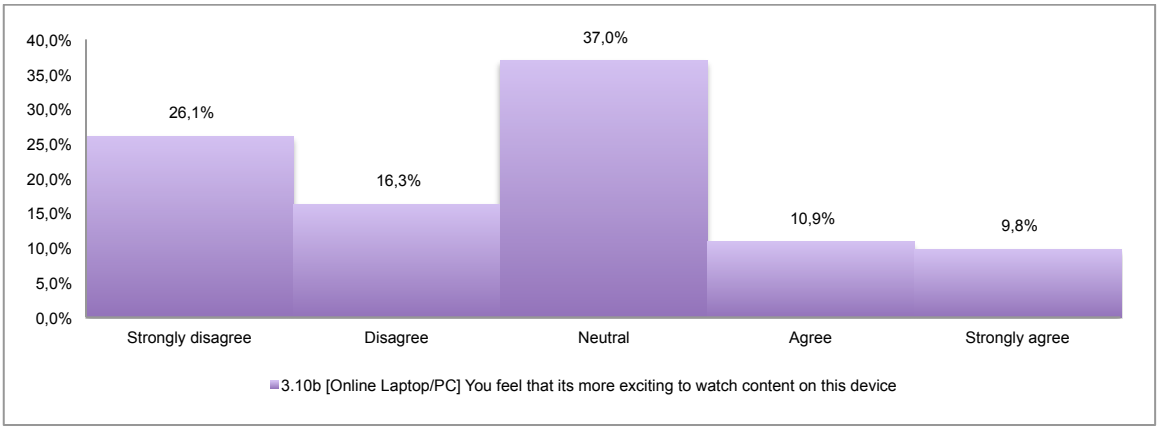
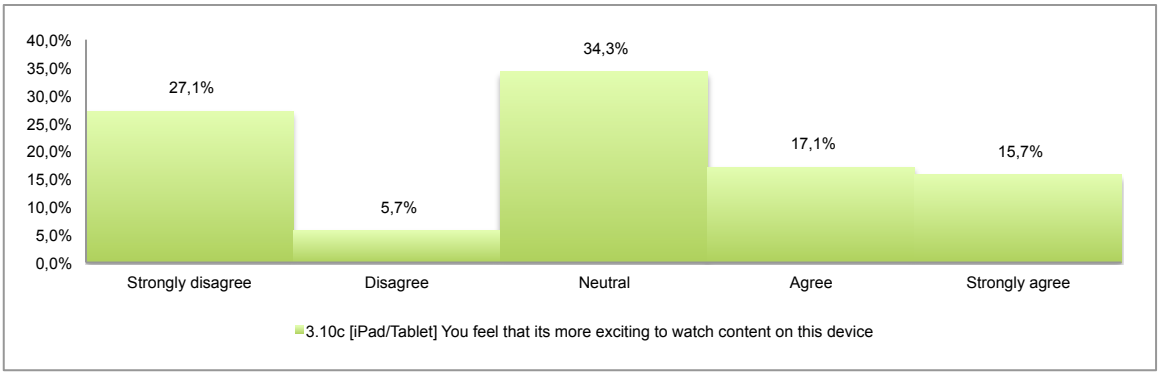


Figure 5.19 Watching VOD Content On Tablet Is Exciting



5.4.2.5 Entertainment

When rating entertainment as a function of watching on demand content on PVRs, the vast majority of respondents agreed or strongly agreed that PVR is an entertaining device to watch on demand content on, with percentages of 29,8% and 53,6% respectively. Laptop use was rated as neutral (33,7%) or more positive with the 'agree' (25,0%) and 'strongly agree' (13%) outweighing the negative statements. The tablet use exhibited similar patterns with consumers divided between 'neutral' (27,5%), 'agree' (27,5%) and 'strongly agree' that outweighed the disagreeing statements.

Figure 5.20 Watching Catch Up Content On PVR Is Entertaining

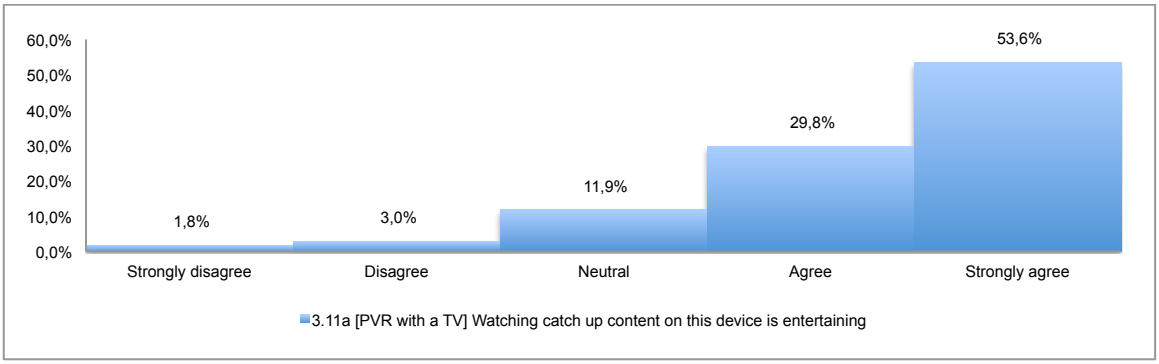


Figure 5.21 Watching Catch Up Content On A Laptop Is Entertaining

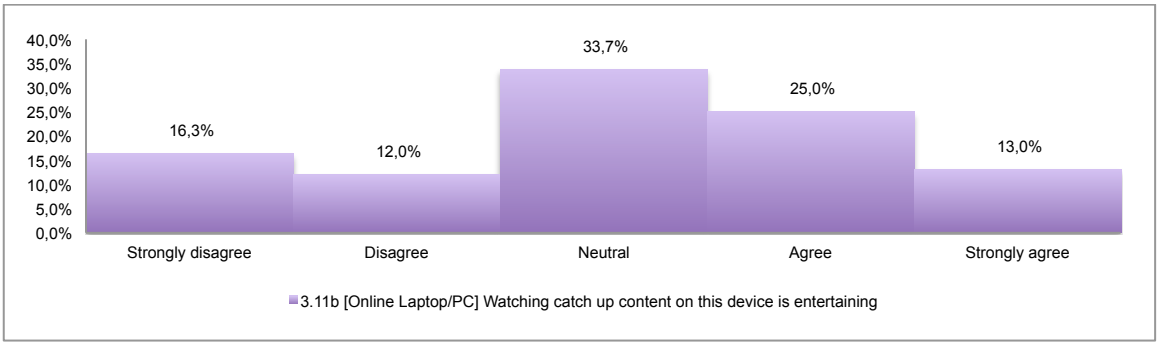
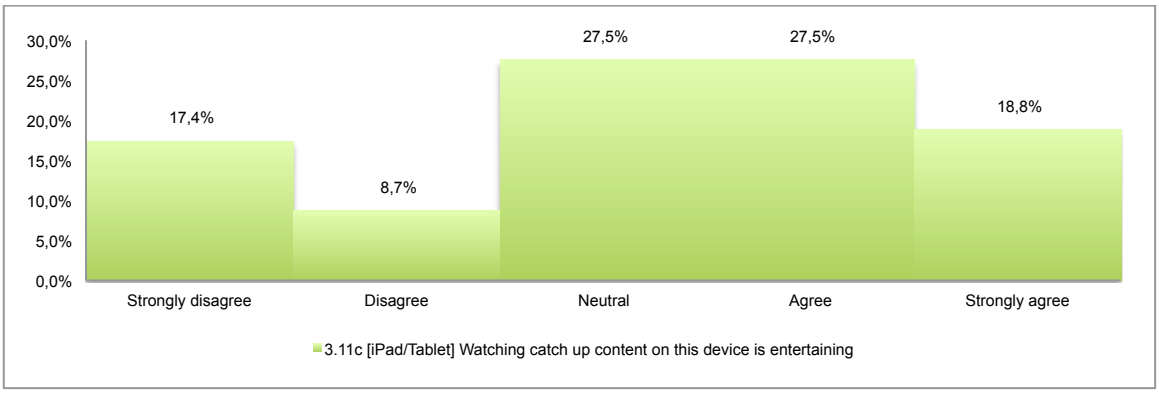


Figure 5.22 Watching Catch Up Content On A Tablet Is Entertaining



5.5 Proposition Three: Channel Familiarity and Convenience

Proposition Three is related to respondents' familiarity and convenience and their choice for watching on demand content on a particular device. The proposition consists of the following three statements:

1. The higher the rating of the channel for being comfortable to watch VOD TV, the greater the probability of choosing that channel.

2. The higher the rating of the channel for familiarity to watch VOD TV on, the greater the probability of choosing that channel.

3. The higher the rating of the channel for technical knowledge to watch VOD TV on, the greater the probability of choosing that channel.

5.5.1 Proposition Three Cronbach's Alpha

Table 5.7 summarises overall Cronbach's alpha across the proposition and the statements and the three devices. The Cronbach's alpha is significant enough to show reliability and consistency within each statement and across the three devices.

Table 5.7 Proposition Three Cronbach's Alpha

Platform	Number of Items	Cronbach's Alpha
PVR	3	,830
Laptop	3	,800
Tablet	3	,834

Examining Cronbach's alpha for each individual device affirms the consistency and the strength of each statement. Table 5.8 demonstrates Cronbach's alpha for the three devices. Each individual value for Cronbach's alpha for each individual device use displayed enough strength to be left in the proposition.

Table 5.8 Cronbach's Alpha for PVR use

	Cronbach's Alpha if Item Deleted: PVR	Cronbach's Alpha if Item Deleted: Laptop/PC	Cronbach's Alpha if Item Deleted: Tablet
1. You watch catch up content on this device as you're comfortable using this device	0,818	0,808	0,824
2. You prefer to watch catch up content on this device as you're familiar with this device or platform	0,662	0,655	0,718
3 You like watching catch up content on this device as you feel that you have better technical knowledge of this device	0,801	0,685	0,757

5.5.2 Proposition Three Correlation Analysis

Once consistency and reliability were established, correlations analysis was conducted to examine the relationship between the dependent variable (choosing the channel) and the determinants of the proposition. Table 5.9 summarises correlations between the three devices and the statements.

Table 5.9 Proposition Three Correlation Analysis Between Devices

		Would choose: PVR with a TV	Would choose: Online Laptop/PC	Would choose: iPad/Tablet
Would choose: PVR with a TV	Pearson Correlation	1	1	1
	Sig. (2-tailed)			
	n	165	38	31
You watch catch up content on this device as you're comfortable using this device	Pearson Correlation	0,040	0,198	-0,240
	Sig. (2-tailed)	0,609	0,253	0,237
	n	162	35	26
You prefer to watch catch up content on this device as you're familiar with this device or platform	Pearson Correlation	-0,005	**0,440**	0,002
	Sig. (2-tailed)	0,945	0,008	0,993
	n	162	35	26
You like watching catch up content on this device as you feel that you have better technical knowledge of this device	Pearson Correlation	-0,019	0,114	0,087
	Sig. (2-tailed)	0,813	0,513	0,672
	n	162	35	26
Summated channel familiarity and convenience	Pearson Correlation	0,002	0,300	-0,048
	Sig. (2-tailed)	0,975	0,080	0,815
	n	162	35	26

The relationship between the each statement and the respondents' choices to use each device was examined using Pearson correlation co-efficient. There was a marked absence of strong correlation between any of the statements and device choice with only familiarity and laptop use showing medium strength of a relationship with r=0,440, n=35, p<0,05.

To confirm these results, the relationship between familiarity and convenience on device choice underwent a multiple regression analysis. Since neither PVR nor tablet use yielded any significant correlations, no regression analysis is included in the study.

The analysis of variance for laptop computer use revealed a significance level that was less than 0,05 therefore the null hypothesis is rejected and the model has statistical significance to explain the relationship with laptop choice as a device.

5.5.3 Proposition Three ANOVA and Regression Analysis

Table 5.10 Proposaition Three ANOVA For Laptop Use

	Sum of Squares	df	Mean Square	F	Sig.
Regression	13,471	3	4,490	3,560	0,025
Residual	39,101	31	1,261		
Total	52,571	34			

Within the regression analysis for laptop computer use, *familiarity* was the only value that yielded a noteworthy significance with the rest of the statements yielding no statistically significant values.

Table 5.11 Proposition Three Regression Analysis For Laptop Choice

	Unstandardised Coefficients		Std Coefficients			Correlations		
	B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
(Constant)	2,536	0,865		2,931	0,006			
You watch catch up content on this device as you're comfortable using this device	0,012	0,239	0,009	0,049	0,961	0,198	0,009	0,008
You prefer to watch catch up content on this device as you're familiar with this device or platform	0,621	0,207	0,667	3,005	**0,005**	0,440	0,475	0,465
You like watching catch up content on this device as you feel that you have better technical knowledge of this device	-0,320	0,202	-0,342	-1,583	0,123	0,114	-0,274	-0,245

There is enough statistical evidence to partially accept proposition three. A relationship exists between familiarity of using laptop/PC devices and the likelihood of choosing a laptop device.

5.5.4 Proposition Three Individual Statement evaluation

5.5.4.1 Familiarity

The respondents indicated a strong familiarity towards preference of watching on demand content and familiarity of PVR as a device with 61,9% of their response marked as 'strongly agree'. The indications for laptops and tablets had a wider spread with 28,7% choosing to indicate 'neutral' for laptop usage with more consumers indicating 'strongly disagree' 23,4% than 'strongly agree' 13,8%. This is similar to the tablet familiarity and usage with 32,9% indicating 'neutral' and 24,3% selecting 'strongly disagree'.

Figure 5.23 Familiarity Of PVR As A Device

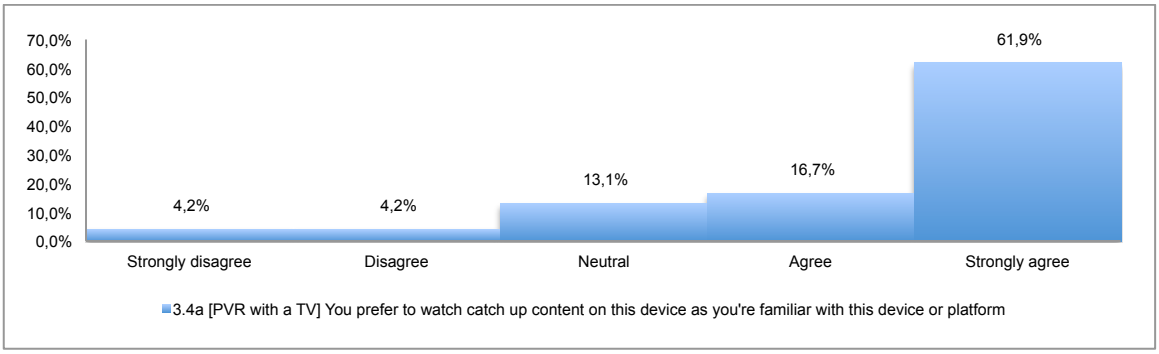


Figure 5.24 Familiarity Of Laptop As A Device

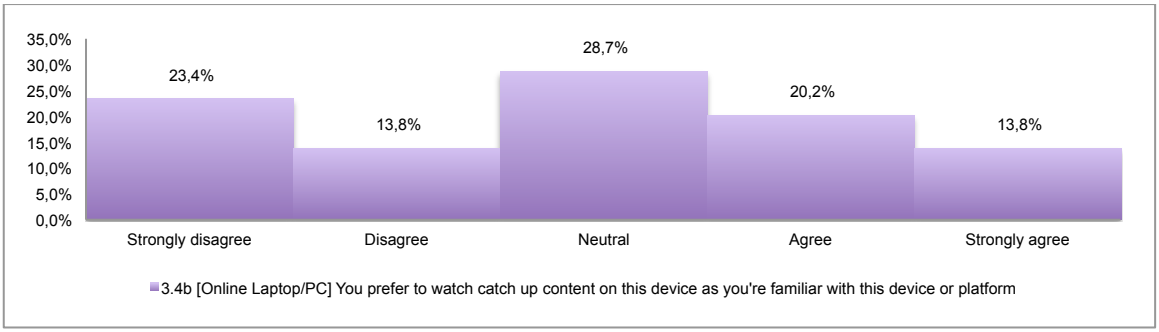
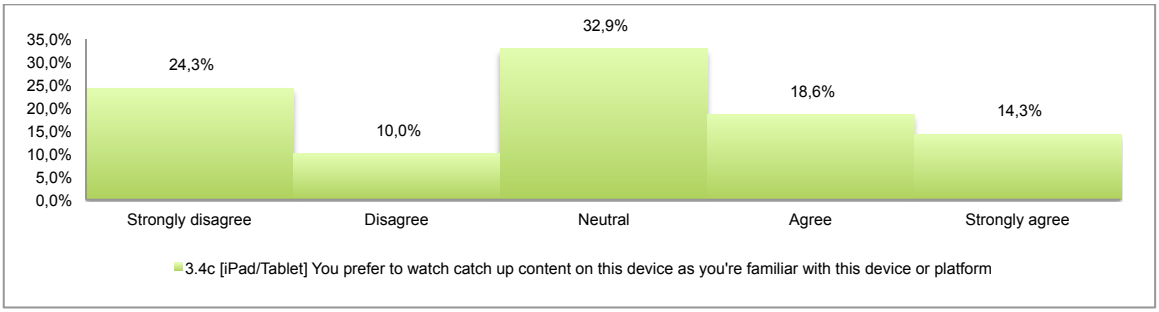


Figure 5.25 Familiarity Of Tablet As A Device



5.5.4.2 Technical Knowledge

PVR users felt most strongly about their technical knowledge of the PVR with 48,2% responding with 'strongly agree' to the statement. Laptop/PC respondents were less confident about their technical knowledge of the PVR with over one third of respondents indicating "neutral" as their selection in both instances: laptop 31,5% and tablet 33,3% marking their response as neutral. There was a slight skew towards negative responses for both laptop and tablet which can be attributed to the age of the sample group, who may not feel that they have the same level of knowledge on relatively newer technology such as mobile devices.

Figure 5.26 Technical Knowledge Of PVR As A Device

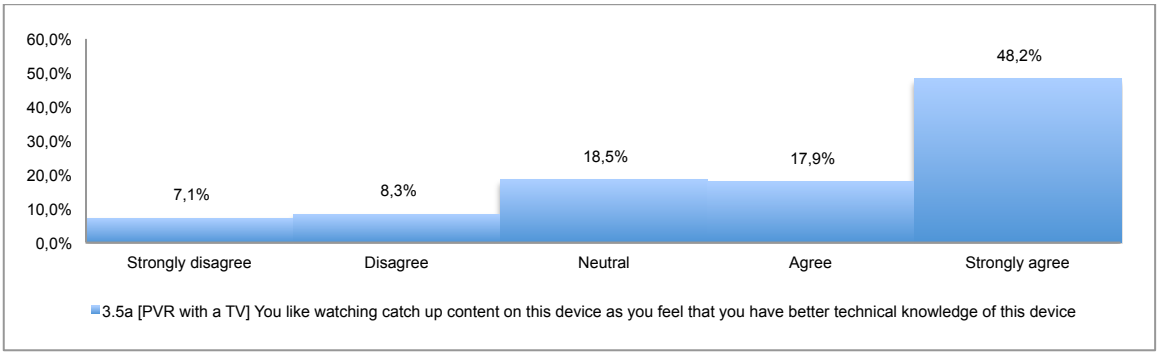


Figure 5.27 Technical Knowledge Of Laptop As A Device

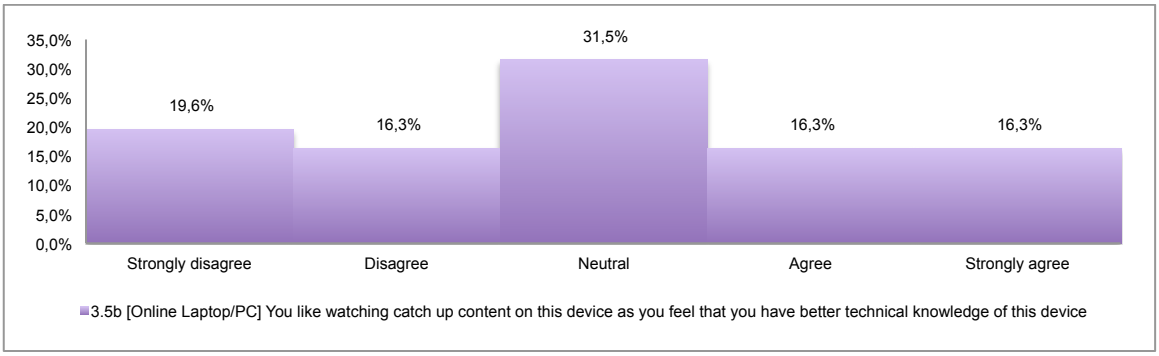
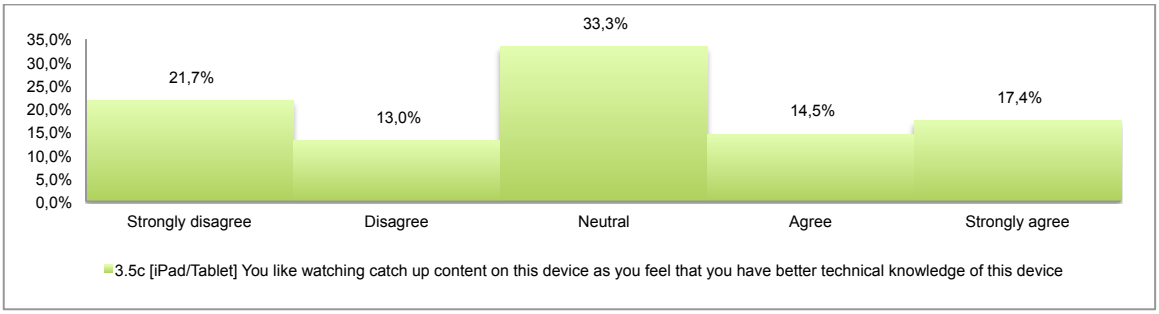


Figure 5.28 Technical Knowledge Of Tablet As A Device



5.5.4.3 Comfort

Respondents felt strongly about being comfortable in using PVR with 70,2% strongly agreeing to the statement. More laptop/PC users felt comfortable in using the device than previous statements with 27,2% selecting 'strongly agree' with an additional 19,6% selecting 'agree', which outweighed the negative selection. Similar responses are observed for tablet use, with 26,1% strongly agreeing and a further 20,3% agreeing that using the tablet to watch on demand content on is comfortable.

Figure 5.29 Comfort Of Using PVR

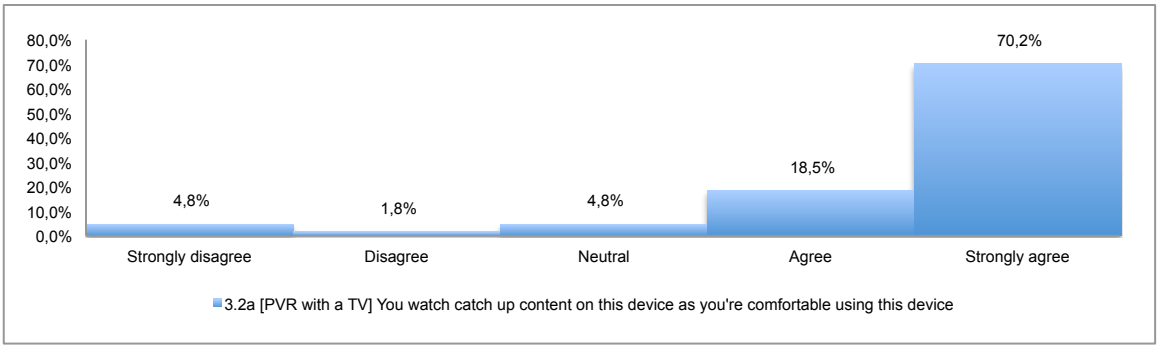


Figure 5.30 Comfort Of Using A Laptop/PC

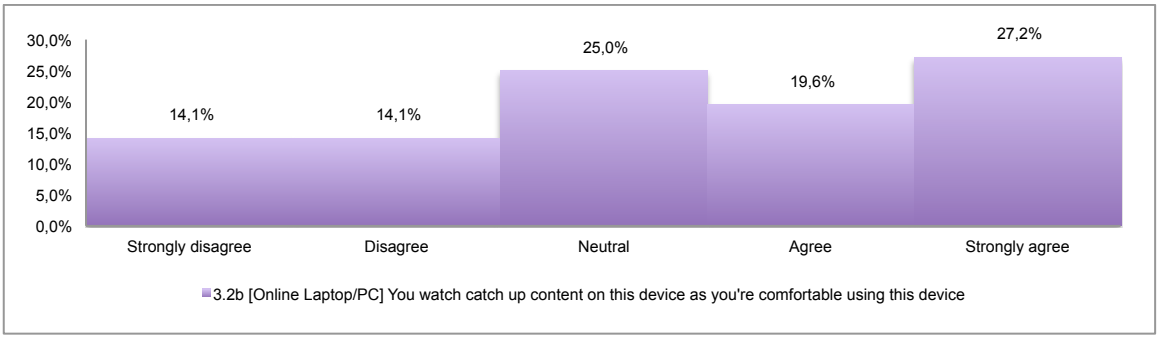
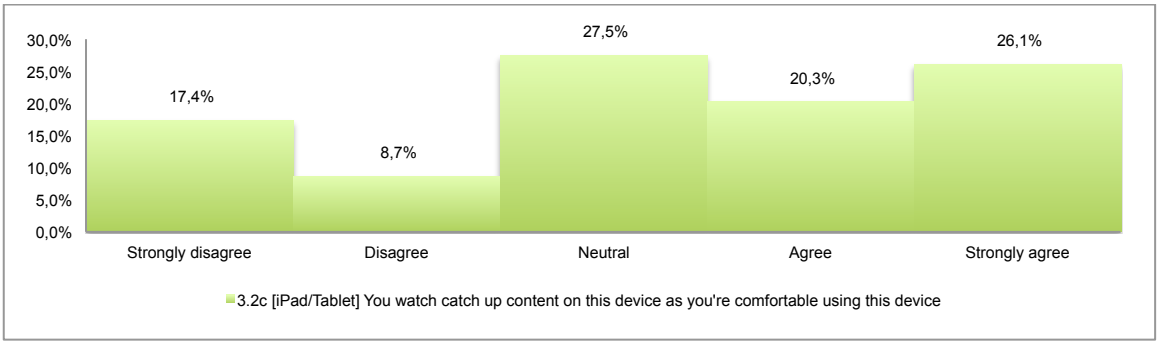


Figure 5.31 Comfort Of Using Tablet



5.6 Proposition Four: Contextual Situations

Contextual situations arise out of the context that the consumers find themselves in when watching on demand content on different devices. These include their surroundings as well as with whom they are sharing the device while watching. The following four propositions were identified:

1. The higher the rating of the channel for watching VOD TV alone on, the greater the probability of choosing that channel.

2. The higher the rating of the channel for watching VOD TV with friends or family, the greater the probability of choosing that channel.

3. The higher the rating of the channel for watching VOD TV while travelling or mobile, the greater the probability of choosing that channel.

5.6.1 Proposition Four Cronbach's Alpha:

Overall, weak Cronbach's alpha illustrated a minimal internal consistency within the proposition and devices. Upon closer examination of the individual statements it is evident that the family setting influences Cronbach's alpha negatively and it was removed from further analysis to improve the score, even if marginally.

Table 5.12 Proposition Four Overall Cronbach's Alpha

Platform	Number of Items	Cronbach's Alpha
PVR	3	-,103
Laptop	3	-,164
Tablet	3	**0,435**

Table 5.13 Individual Cronbach's Alpha

	Cronbach's Alpha if Item Deleted: PVR	Cronbach's Alpha if Item Deleted: Laptop/PC	Cronbach's Alpha if Item Deleted: Tablet
1. You prefer to watch catch up content when you're alone	-0,115	-0,016	0,224
2. You prefer to watch catch up content on this device when you're with your friends or family	0,430	0,392	**0,677**
3. You prefer to watch catch up content on this device when you're travelling or mobile	-0,876	-1,351	0,083

5.6.2 Proposition Four Correlation Analysis

There was a marked absence of any significant correlations upon closer examination of the statements. Only combined contextual constructs had a *p* value that was less than 0,05, which warranted further investigation with a regression analysis. No other constructs yielded any statistically significant results.

Table 5.14 Proposition Four Correlation Analysis

		Would choose: PVR with a TV	Would choose: Online Laptop/PC	Would choose: iPad/Tablet
1. Would choose: PVR with a TV	Pearson Correlation	1	1	1
	Sig. (2-tailed)			
	n	165	38	31
2. You prefer to watch catch up content when you're alone	Pearson Correlation	0,069	0,255	-0,054
	Sig. (2-tailed)	0,382	0,139	0,794
	n	162	35	26
3. You prefer to watch catch up content on this device when you're travelling or mobile	Pearson Correlation	-0,139	0,343	-0,382
	Sig. (2-tailed)	0,093	0,041	0,054
	n	148	36	26
Summated Contextual Statements	Pearson Correlation	-0,011	**0,383**	-0,216
	Sig. (2-tailed)	0,886	**0,021**	0,288
	n	162	36	26

5.6.3 Proposition Four ANOVA

The ANOVA table for laptop use yielded a significance level of 0,079, which is higher than the required *p* value of 0,05 and therefore the null hypothesis cannot be rejected and the model is statistically insignificant to explain any relationship between he likelihood of choosing a device and the contextual situation that the respondents find themselves in.

Table 5.15 ANOVA Table for laptop use

	Sum of Squares	df	Mean Square	F	Sig.
Regression	7,723	2	3,861	2,755	0,079
Residual	44,849	32	1,402		
Total	52,571	34			

Proposition four did not yield enough statistically significant evidence to support the proposition with one of the statements showing no internal consistency within the data.

5.6.4 Proposition Four: Individual Values

5.6.4.1 Setting (alone/family)

Respondents' answers were skewed more favourably to watching catch-up content on tablet devices when alone (30% 'strongly agree' and 14,3% 'agree') and had a heavy dislike when watching VOD content on tablet or laptop devices when not alone, as 41,3% 'strongly disagree' to laptop use in a family setting and 37,1% 'strongly disagree' to tablet use. This is confirmed by the ability to share content on devices within the household. Of the respondents, 78,7% shared their catch up time with friends and family on PVR as opposed to 11,2% and 11,7% who shared VOD content for laptop and tablet use (see Figure 5.38).

Figure 5.32 Watching VOD Content Alone On Laptop/PC

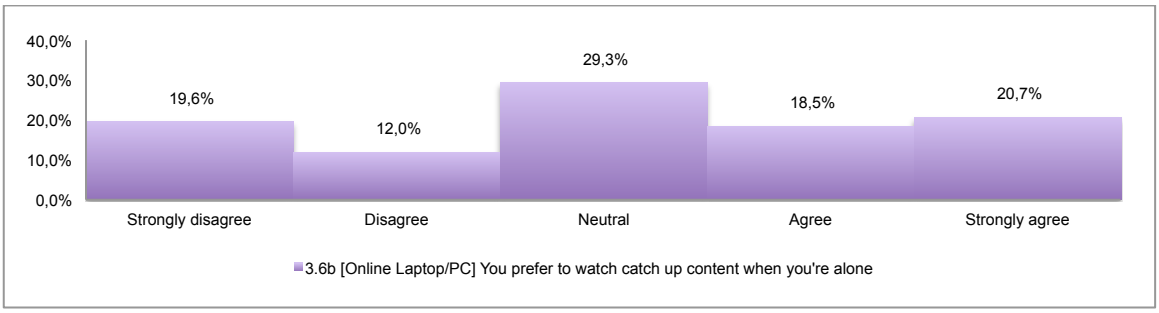


Figure 5.33 Watching VOD Content Alone On PVR

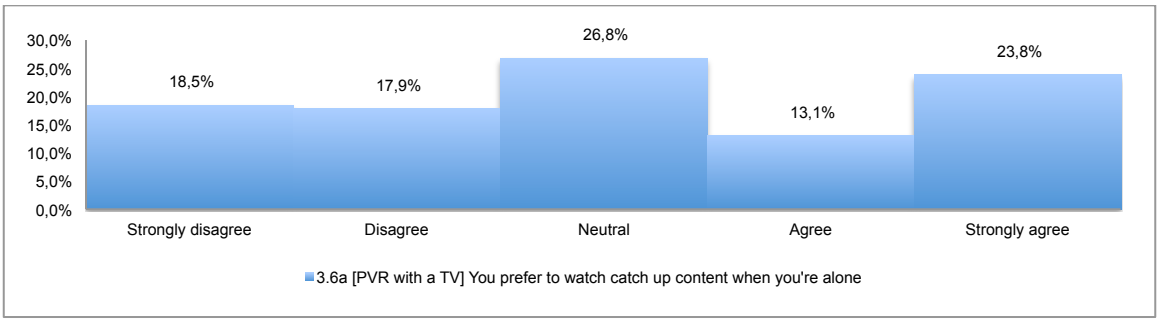


Figure 5.34 Watching VOD Content With Family On PVR

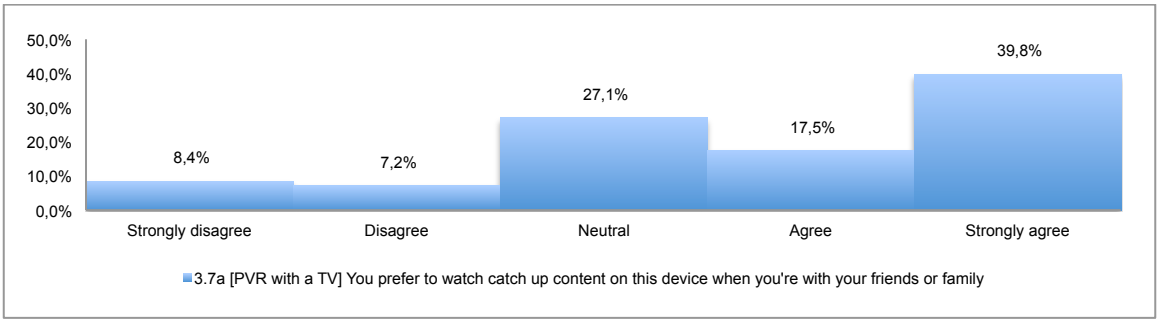


Figure 5.35 Watching VOD Content Alone On Tablet

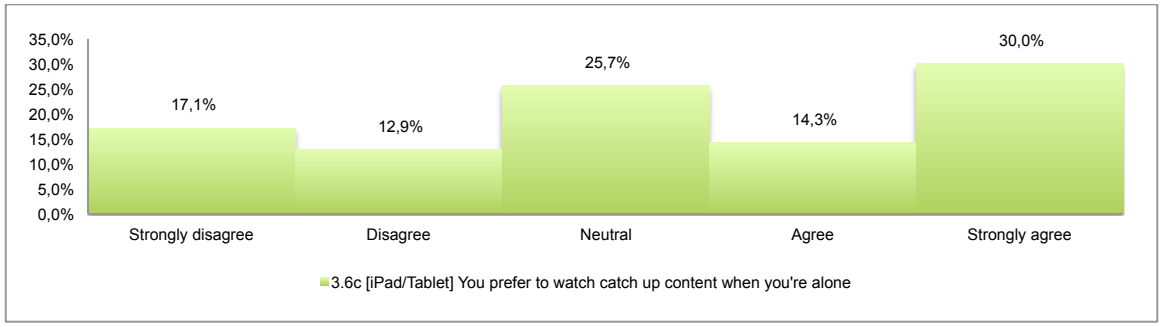


Figure 5.36 Watching VOD Content With Family On Laptop/PC

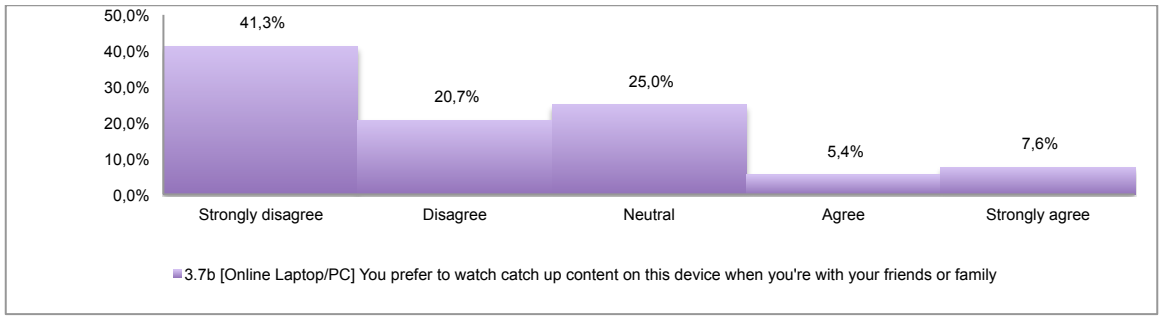


Figure 5.37 Watching VOD Content With Family On Tablet

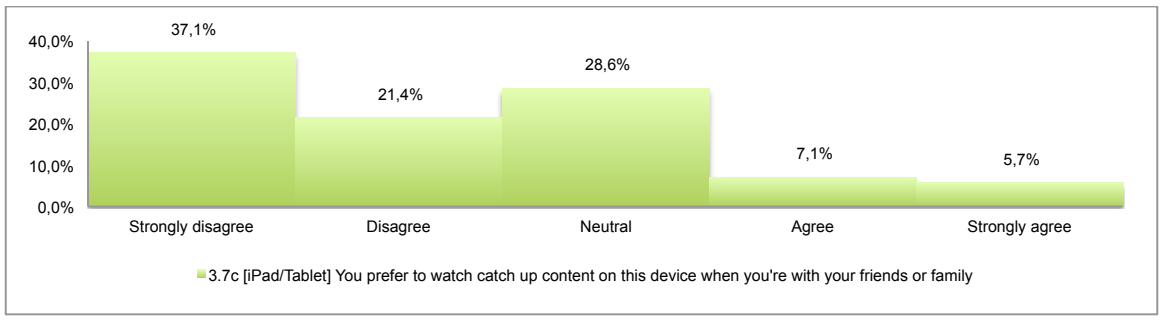
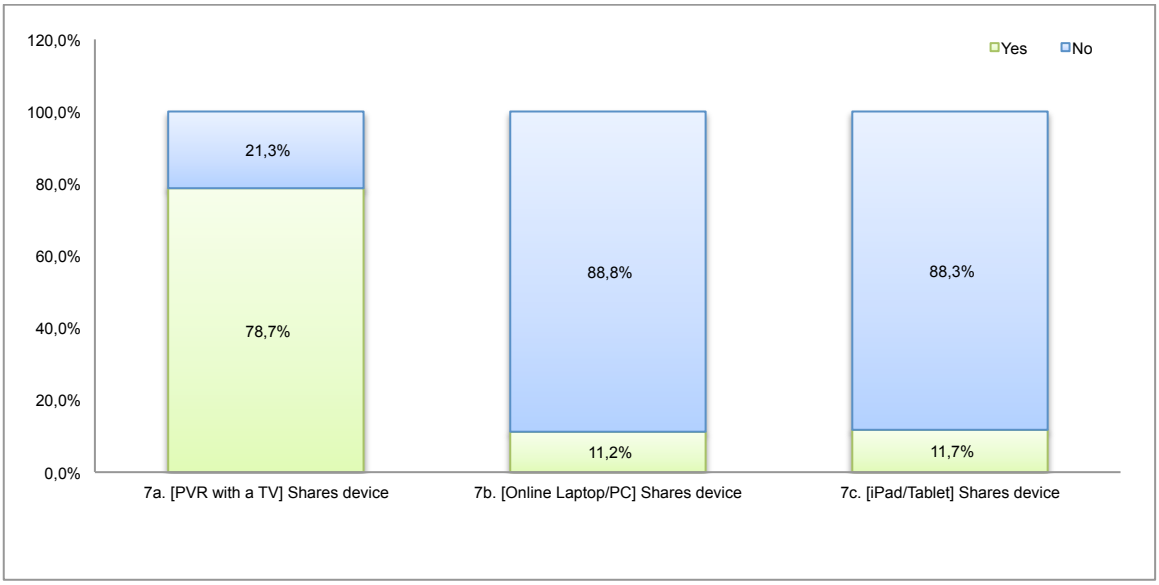


Figure 5.38 Sharing Across Devices



5.6.4.2 Mobility

Respondents felt the strongest about having the tablet as a device to use when mobile, 45,2% 'strongly agree' to use it to watch catch up content when on the move. PVR was the least likely to be used when travelling, with 60,4% of individuals who 'strongly disagree' to using a PVR to watch catch-up content on the move. These results are in line with expectations of using devices when travelling.

Figure 5.39 Watching VOD Content On PVR When Travelling

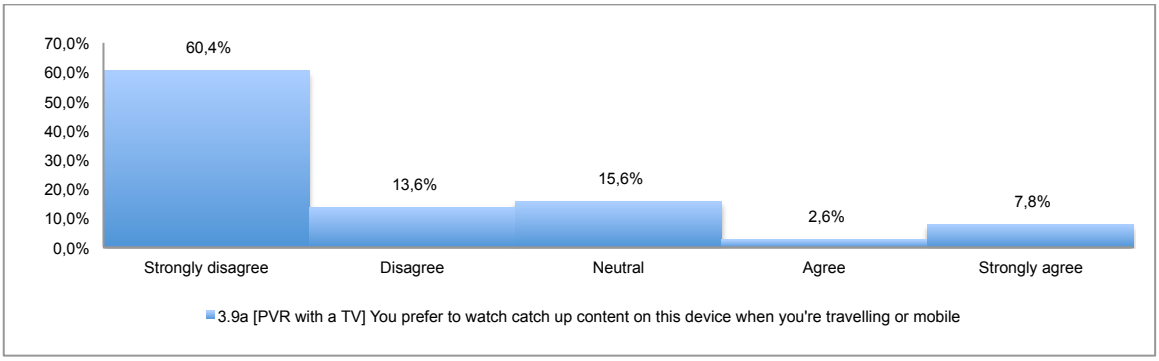


Figure 5.40 Watching VOD Content On Laptop/PC When Travelling

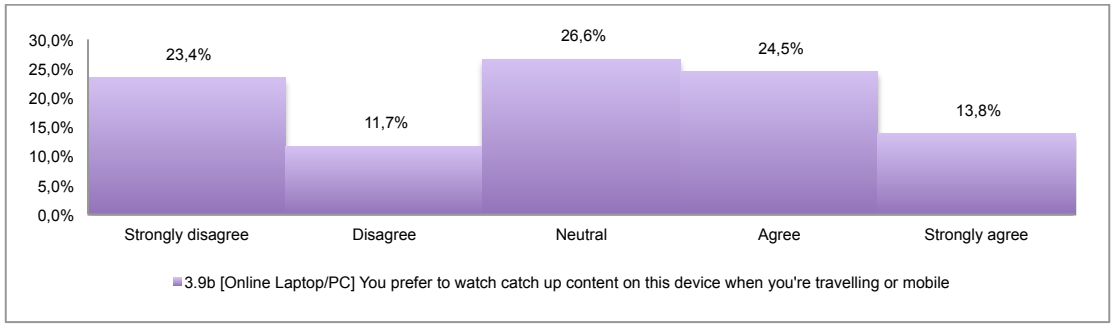
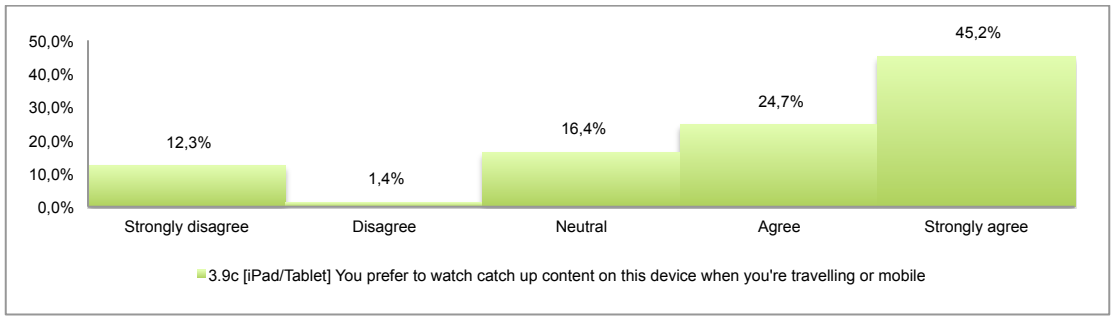


Figure 5.41 Watching VOD Content On Tablet When Travelling



5.7 Conclusion

Chapter Five documented results collected and tested using the methodology outlined in Chapter Four. It was found that proposition one and four were not supported by the evidence gathered from the data, and proposition two and three were partially supported by the data. Individual responses are also reported on in this chapter in order to showcase the respondents' selection for analysis. Chapter Five provided a detailed analysis of the results presented in relation to the theory as provided in Chapter Two.

CHAPTER 6: DISCUSSION OF RESULTS

This chapter serves as a discussion of the findings presented in Chapter Five in relation to the theory that was stated in Chapter Two and the propositions that were identified in Chapter Three. Each proposition is presented and discussed separately.

6.1 Demographics of the Sample

This study was conducted amongst eligible pay-tv, top tier package users who have Internet access and are known to view on demand content across a number of devices. It is interesting to note the age demographics of the sample, with 69,7% of users over 35 years of age. Age is an interesting factor in technology adoption and use. Many authors have noted that older users may feel adversely against innovative and newer technology (Venkatesh et al., 2012; Perkings, 2007; Courtois, 2012). The demographics of the sample have a substantial impact on device choice as technology in the study is relatively innovative and is yet to have an impressive influence with pay-tv subscribers based on the users that this study was able to attract (n=188). Of the respondents, 89,9% of users had access to a PVR, 50,0% had access to laptop computers and only 34,6% had access to handheld tablet devices.

This study did not use probability sampling and it is impossible to confirm whether the age and access to devices are related. However, the demographics revealed that the respondents were older, and while there are less tablet users in this age group, there are also less tablet users across all age groups. For the purposes of this research it is important to note the age demographics and the impact of the respondents' ages on the results of this study. If probability sampling could have been used, the results and access outcomes may have been different to those displayed in this research report.

6.2 Likelihood Of Choosing A Device

The questionnaire was structured around an integral question, which asked the respondents the likelihood of choosing a particular device for future on demand consumption.

The respondents felt very strongly that they would choose a PVR with a TV in the future, which correlates to the positive responses to familiarity and comfort of PVR use.

PVR was indicated as likely to be chosen by 79,3% of respondents, with 61,9% strongly agreeing that they are familiar with this device and 70,2% indicating that they are comfortable with using this device to watch on demand content. Overall these initial numbers confirm Albesa's (2007) findings that consumers are likely to choose devices that they are comfortable using.

When the statement pertaining to the laptop was analysed, there was considerably less enthusiasm displayed by this sample group with only 8,0% indicating that they are 'very likely' to choose this channel in the future, with a further 12,2% selecting 'likely' as their probability to choose this device in the future. Although not as widespread as PVR, the laptop computer enjoys high familiarity and comfort within this sample, which is discussed under proposition three.

The tablet as a device was the least likely to be chosen as a device for on demand consumption in the future when the extreme answers of 'very likely' are considered (merely 6.4%). A further 17,0% indicated that they are likely to choose this channel in the future, which brings the total positive inclination for future use to 23,4%, which outweighs the future likelihood of choosing laptops. The tablet enjoyed the largest proportion of users that indicated that they are 'very unlikely' (51,1%) to choose the channel in the future. This is noteworthy in light of the age demographics of this sample and dominant PVR use for on demand consumption.

Overall, there was widespread positive response to PVR use amongst this sample with all of the propositions and statements enjoying a majority 'strongly agree' concerning the individual statements, except *mobility* and w*atching on demand content alone*. This is in line with the numbers of respondents who have access and make use of PVR.

Since a Likert-type scale was used for measurement of this study, the intervals between the scales cannot be assumed equal as these are ordinal data (Jamieson, 2004). The laptop computer users were less inclined to feel strongly about their on demand consumption on their devices with a marked majority of responses achieving a neutral scoring. This does not necessarily indicate that they felt ambivalent about their viewing of on demand content on the laptop computer, only that the particular statement did not elicit strong positive or negative attitude.

While this is common in ordinal data collected through scales, tablet responses showed a bipolar attitude towards most of the statements. The respondents felt either strongly positively or strongly negatively about their use of the device in relation to the

statements presented to them. This could be in line with the tablet being a relatively new technology with a small amount of users out of the sample group and weak take-up overall, contrasted with those who use them feel strongly about them.

Overall the data gathered was in line with observed behaviour of pay-tv subscribers with the PVR being the most accessed and widely used device followed by laptop computer and trailing by tablet devices. Each proposition is now discussed comprehensively in relation to academic literature and theory uncovered in Chapter Two.

6.3 Proposition One

The higher the rating of the channel for being beneficial to watch VOD TV, the greater the probability of choosing that channel.

Proposition one addressed the likelihood of using a device in relation to consumers deriving benefit from watching on demand content on this device. Data for the three devices was analysed through a correlation analysis and no significant statistical relationship was seen to exist for any of the devices and the construct. Based on the lack of evidence, the proposition was rejected together with the null hypothesis, meaning that the statistical model showed no relationship for this proposition.

Although the proposition was rejected, it is of interest to discuss the individual responses together with the reasons why there was insignificant evidence to support the proposition. Gensler *et al.* (2012), stated that the greater the utility of a channel the higher the likelihood of that channel being selected. Based on the number of the responses that were gathered through the completion of the questionnaire, it was revealed that watching on demand content on PVR should yield the most amount of benefit, because out of 188 responders 89,9%had access to PVR and it would stand to reason that the respondents achieve benefit from using the device, given this popularity.

The benefit of using PVR as a device to view on demand content received an overwhelming agreement from the responders, with 52,4% strongly agreeing and 22% agreeing that PVR's bring them the largest benefit. When choice as a channel was analysed, 79,3% respondents selected that they would choose this channel in the future. This confirms that PVR is a widely used device from which consumers feel they receive benefit.

Rosen (2003) and Scarre (1995) cautioned that utilitarian values are difficult to measure and form a number of theories and not a single one. This research focused only on measuring one construct of utilitarian values. It would have been beneficial to measure additional values that could have included practical, necessary, efficient, handy and valuable values across a wider sample base.

The questionnaire asked the respondents about their likelihood of using the device in the future, where a more useful way to ask the respondents would be based on satisfaction. This would have aided the study in achieving different data that may lead to a new conclusion.

6.4 Proposition Two

1. The higher the rating of the channel for being fun to watch VOD TV , the greater the probability of choosing that channel.

2. The higher the rating of the channel for being enjoyable to watch VOD TV, the greater the probability of choosing that channel.

3. The higher the rating of the channel for being pleasurable to watch VOD TV, the greater the probability of choosing that channel.

4. The higher the rating of the channel as being exciting to watch VOD TV, the greater the probability of choosing that channel.

5. The higher the rating of the channel for being entertaining to watch VOD TV, the greater the probability of choosing that channel.

Proposition two measured five constructs of hedonistic gains. Voss *et al.* (2003) advocated that hedonistic and utilitarian gains should be measured separately and utilitarian and hedonistic gains were separated for the use of this study.

Cronbach's alpha measurement on proposition two revealed a high level of internal consistency across the three devices and the five statements, which indicates internal reliability of the data. There was no significant correlation detected for hedonistic use and PVR or tablet devices, however hedonistic gains for laptop use and the likelihood of choosing that device displayed correlations for the construct as well as for individual statements of *enjoyment*, *pleasure* and *excitement*. Furthermore, *excitement*

demonstrated a statistically significant correlation, although a weak one for tablet use and the likelihood of choosing it in the future.

Hirschman and Holbrook (1982) suggested that the emotive and multi-sensory aspects of using the particular product drive the consumer and this is shown by confirmation of hedonistic gains for laptops—and to a certain extent—tablet use. These findings support Venkatesh *et al.*'s (2012) statement that pleasure gained from using particular technology will enable its use in the case of laptop computers.

Turel *et al.* (2010) suggested that whether the consumer is seeking hedonistic or utilitarian value from the product, will determine the consumers' choice in that product. There is little evidence to support this within the target group, who may be seeking to validate other needs, or it may be a role of habit. Having said that, based on their responses, the consumers clearly feel stronger about experiencing hedonistic values on PVR than they do with the other devices. It is interesting to note then the lack of correlation exhibited by the PVR responders to choose the channel in the future, based on these needs and other device users.

Balasubramanian *et al.* (2005) stated that consumers may retrieve value not just through their selection of a particular channel or a device but from other peripheral components such as the channel itself, or in this case the device that has been chosen. The content that this device is able to bring the consumer and the nature of the content--whether it is on demand movies or series—as well as the current context that the consumer finds him/her-self in will influence choice. The propositions individually build-up on this indication and the study presents evidence to support the difference of the three stages in the consumers' minds.

Enjoyment, pleasure and excitement are all values that belong to the hedonistic group and it is interesting to note that there is evidence to support these three values and not fun or entertainment. On closer inspection, consumers may confuse enjoyment and pleasure or use them interchangeably which all lead to excitement. Pleasure is a powerful motivator for human behavior (Broekhuizen & Jager, 2004) and has been shown to work effectively for mobile devices in previous studies (Bruner & Kumar, 2005). It can further be argued that a laptop computer can function as a mobile device which can be used for on demand viewing in different locations or while on the move.

Broekhuizen *et al.* (2004) argued that enjoyment of interactive products is higher than that of other products and computers offer a higher degree of interaction than the other

two devices, which may have influenced the respondents' selection. Both tablet and laptop devices achieved a statistically significant correlation for excitement and this supports Kwon and Jain's (2009) proposition that users will experience excitement while seeing out new products. Tablets as media consumption devices have only been around for a relatively short amount of time, and given the age demographics of this sample the older generation may find the tablet devices exciting to use. It is important to differentiate between achieving a sense of excitement while seeking out a device, using that device or the content experienced on that device or the outcome. These three stages are outlined by Balasubramanian *et al.* (2005) and it is unclear from the data whether the respondents thought the seeking out of the device was exciting or whether the content that they are able to view on it was exciting.

It is also worth considering some of the criticism of pleasure as a value, noting Tiberius and Hall's (2010) assertion that pleasure is difficult to measure and users may view something as a false pleasure. This may provide the answer to why the PVR users responses did not support the proposition.

In summary, laptop computer use showed a correlation for likelihood of use based on the following values: enjoyment, pleasure and excitement and therefore the proposition cannot be rejected. The weak correlation for tablet use may be the result of the sample size (n=26) and may be boosted if a larger sample size could be achieved.

6.5 Proposition Three

Third proposition is related to a sense of convenience and familiarity in channel choice.

1. The higher the rating of the channel for being comfortable to watch VOD TV, the greater the probability of choosing that channel.

2. The higher the rating of the channel for familiarity to watch VOD TV, the greater the probability of choosing that channel.

3. The higher the rating of the channel for technical knowledge to watch VOD TV, the greater the probability of choosing that channel.

Conbach's alpha showed consistency of the statements, with all three values across devices over 0,8, which is strong enough to indicate reliability. Therefore no data was altered to discard any of the statements in order to improve consistency.

No overall statistical significance was witnessed during the correlation analysis, although the likelihood of choosing laptop computers had a statistically significant correlation, albeit a weak one of 0,440. This supports the notion that familiarity gives rise to channel adoption as propounded by Balasubramanian *et al*. (2005) and Alba and Hutchinson (1987).

By exploring this construct further, regression analysis showed a statistically significant outcome for *Familiarity* and laptop use. None of the other statements for laptop computer use exhibited any significant evidence of showing a relationship for the likelihood of laptop use and comfort or technical knowledge. This is not to say that the theory is not supported, only that this sample of n=35 respondents does not support the proposition.

Based on the fact that one of the devices, namely laptop computers, demonstrated a statistically significant relationship, proposition three is partially accepted with a Beta value of 0,621. Consuming content on computers is not a novel phenomenon and has been steadily documented in literature (Doyle 2010). There is a possibility that the reason that tablet devices did not exhibit similar outcomes is due to them being a relatively newer method of consuming on demand and TV content and based on the age demographics of this sample, tablet or handheld devices are a newer technology and these respondents may not feel comfortably familiar with them. This is supported by the individual answers of users regarding familiarity with the tablet, where 24,3% answered “strongly disagree” and a further 10,0% answered “disagree” which outweighs the positive responses, even if slightly which are 18,6% for “agree” and 14,3% for “strongly agree”.

Doong, Wang and Foxall (2011) found that familiarity acts as an umbrella concept; if customers are familiar with one product they will be likely to trial something new from the same brand. This could be applicable in the instance of on demand viewing on laptop computers, as there was a large sample number of users who viewed on demand content on PVR (n=165) who are clearly very familiar with the product, as 61,9% strongly agreed to feeling familiar with viewing on demand content on PVR.

Familiarity is often a function of convenience and ease-of-use (Unni et al, 2010) and it is evident from the individual responses to the comfort statement that consumers feel that they are comfortable in using the laptop computer as a device with which to watch on demand content, with 27,2% strongly agreeing to the statement with an additional

19,6% indicating that they “agree”. This supports the view of Albesa (2007) that greater convenience leads to a stronger likelihood of that channel being chosen.

Interestingly enough, tablet device also achieved a more positive response to the statement concerning “comfort”, with 26,1% strongly agreeing and 20,3% agreeing that they are comfortable with viewing on demand content on this device. This supports O’Hara’s (2007) observation where consumers found that they liked to watch time-shifted content in their own time (in bed) as it was more convenient and comfortable to do so, and they could assume a more comfortable physical position.

In summary, proposition three is partially accepted as there is statistically strong evidence that familiarity of laptop use leads to it being chosen to view on demand content in the future.

6.6 Proposition Four

This proposition dealt with the contextual factors of channel choice. The following four statements were analysed between the three devices:

1. The higher the rating of the channel for watching VOD TV alone, the greater the probability of choosing that channel.

2. The higher the rating of the channel for watching VOD TV with friends or family, the greater the probability of choosing that channel.

3. The higher the rating of the channel for watching VOD TV while travelling or mobile, the greater the probability of choosing that channel.

This proposition constituted three statements that included a respondent being alone while consuming on demand content, together with family or mobile while using different devices. Cronbach’s alpha tests revealed weak consistency between the statements with family viewing identified as the one statement that, if removed, can increase the Cronbach’s alpha to a more acceptable but not ideal measure of 0,430 for PVR use, 0,392 for laptop use and 0,677 for tablet use. These scores indicate a weak internal consistency and reliability of the data.

Leading on from Cronbach’s alpha evaluation, correlation analysis uncovered no statistically significant correlations. There was an overall statistically significant but weak correlation for contextual laptop computer use and the likelihood of using it in the

future. Further analysis did not reveal any relationship and no other tests were run for the proposition as it was not showing any more evidence of supporting the proposition based on the three tests conducted. However, the proposition cannot be rejected based on the outcome for contextual laptop use results, which shows that a relationship does in fact exist.

This outcome is an interesting although not a surprising one. Much has been written about changing consumer viewing patters over the past few years. O'Hara (2007) delved comprehensively into the topic of mobility, Doyle (2010) discussed convergence and Cesar *et al.* (2009a) documented family consumption changes of both content and device use. This proposition examines these contextual effects and it is the fact that there is slight statistical evidence in a relationship between contextual laptop use and the likelihood of choosing it that serves to add to this thinking and line of work.

By analyzing the individual responses for each statement, PVR was seen to be the device that was most used for sharing with friends and family, with 39,8% of respondents strongly agreeing and a further 17,5% selecting 'agree' to sharing this device with friends and family. This is confirmed by their indication whether they like to share the device with others with 78,7% indicating that they share media consumption on the PVR with friend and family. This reaffirms the notion of the TV being the center of the household, social glue that binds families (Cesar et al. 2009b), as respondents are happy to share their viewing experiences with others in their social circle.

This is in contrast to tablet and laptop computer use, with almost 9 out of 10 respondents choosing not to share their devices. This is confirmed by 41,3% of laptop computer users that strongly disagree to watching on demand content on these devices when around friends and family. Similarly, 37,1% of tablet users indicated that they also do not like to view on demand content on this device around friends and family. This alludes to consumers preferring to watch their own personalized viewing experiences as discussed by Montpetit *et al.* (2010) and O'Hara (2007), which in itself implies that the consumer requires a device that can be moved to a different location such as a laptop or a handheld tablet device in order to gain some privacy or solitude. This validates the work by Cesar and Chorianopoulos (2009), Cesar *et al.* (2010) and Rudstro *et al.* (2010) who depicted on demand viewing on mobile and handheld devices in consumers' own time and space.

6.7 Changing Consumer Behaviour

The fact that PVR as a device, despite its widespread adoption and use, did not produce any strong statistical evidence as being chosen for future use in relation to these constructs, serves to confirm what Cesar *et al.* (2009a); Donders and Evans (2011); Abreau *et al*. (2013), have identified as changing consumer behaviour. In their studies, these authors have explained that the consumer households are changing and there are multiple devices being used throughout for more personalized and individual media consumption. This is further supported by the respondents' attitudes towards laptop and tablet use in contextual situations. There was a strong response to opting to watching on demand content on their tablets when they are alone and away from friends and family. O'Hara (2007) noted how consumers were choosing to watch content at the same time as the rest of the households in a separate room as a means of 'me time', relinquishing the continuous fight for the TV remote control.

On demand consumption is reliant on three dimensions of time, place and content (Van den Broeck, 2008) that allows the consumers to view content in their own time and place. It is not surprising that devices such as laptop computers and tablets displayed signs of correlation for hedonistic, contextual and familiarity propositions. Narasimhan (2011) and Gallo *et al.* (2009) further described these changing viewer trends to shift their TV viewing to time and places that are convenient to them.

There was no statistically significant relationship observed for utilitarian gains. This could be understood as a sign of changing consumer behaviour. It can be argued that entertainment is hedonistic in nature and this is also applicable to on demand content, as this is entertainment that the viewer is choosing to view in their own time and space, providing them with a greater hedonistic benefit.

The evidence supporting laptop use for hedonistic, familiarity and contextual use also illustrates the consumers' desires for new and innovative platforms for on demand viewing and convergence of devices and content (Doyle 2013). It is encouraging to see the uptake of newer platforms for media consumption in the emerging markets where the study was carried out, which is known to trail behind developed countries in terms of new technology use and media consumption.

6.8 Conclusion

Chapter Six described the results outlined in Chapter Five. Three of the propositions presented in Chapter Three were partially accepted and one was rejected due to insignificant statistical evidence. The findings are discussed in line with existing literature expressed in Chapter Two and industry information. The final chapter presents a summary of the results, together with managerial recommendations for the broadcasting industry, directions for future research and limitations of the study.

CHAPTER 7: CONCLUSION

The concluding chapter provides a summary of the findings presented and discussed in Chapters Five and Six of this study. Recommendations for management within the pay-tv sector are provided, together with opportunities for future research as well as a discussion on the limitation of this research study.

7.1 Key Findings

The findings of this research support the changing nature of television consumption and illustrate consumer behaviour that influences channel selection. Television viewing, and especially time-shifted television viewing, is of a complex nature and this study attempted to tackle it through a number of propositions identified in existing literature.

7.1.1 Utilitarian Gains and Device Choice

It was identified that no relationship exists between respondents retrieving benefit from a device and the likelihood of choosing it in the future. This seems counter-intuitive as one would presume that the more benefit a consumer receives from using a device; the more likely they are to use it again in the future. This outcome does not mean that the literature identified is incorrect; merely that the outcome of this target audience did not correlate with the literature. A way to consider this outcome for utilitarian gains is to analyse the nature of entertainment that is hedonistic as its basic premise. Although the respondents recorded high levels of benefits, it did not automatically correlate to a device choice.

7.1.2 Hedonistic Gains And Device Choice

The study found that VOD consumption on laptop computers was linked to enjoyment, pleasure and excitement and there was a likelihood of future use. On demand consumption on tablet devices and the likelihood of choosing the device in the future were linked to excitement. This is in line with supporting literature on the use of new and innovative technologies (handheld tablet devices) and consumer behaviour. The feelings of pleasure and enjoyment were evoked while using the device lead to consumers choosing that device in the future, but only for laptop computers. The other

devices did not elicit the same response and this is likely to be due to PVR being an older, established and widely spread technology where as the tablet and computers are seen as relatively newer devices on which to consume media, especially time-shifted media. Consequently consumer laptop choice is influenced by hedonistic gains such as enjoyment, pleasure and excitement.

7.1.3 Familiarity And Convenience And Device Choice

Channel choice influence by convenience and familiarity are not a novel preposition and there is an abundance of studies that confirm technological use and channel choice based on convenience and familiarity. The analysis of the proposition revealed that only the laptop device gained statistical evidence to reveal a correlation between the familiarity of laptop computer use and device choice. Laptop computers are not a new or a novel device, however these devices are relative newcomers to the landscape for viewing time-shifted content. It is also evident that tablet devices have not become as prolific as the other devices, although they are gaining popularity in both adoption and use.

7.1.4 Contextual Situations And Device Choice

There was not enough statistical evidence to fully support the proposition around contextual use with this target audience, however contextual use of laptop devices displayed a correlation to device choice. This is widely supported by changing consumer patterns of content and mobility of devices. Contextual use for the proposition consisted of being alone or using a device while the user is mobile. There is consistency in the two statements as travel often means that the consumer is in fact alone, hence the need for an individual and a more personalised video consumption device. This experience is grounded in time-shifted content, as the consumer would be able to watch content outside of traditional linear broadcast. This could also be a form of escapism to be alone with favourite content outside of family constraints.

These findings are significant for managers and industry as most device and screen choice for media consumption is based around content, mobility or device specifications.

7.2 Implications For Managers Within The Broadcasting Industry

There are many outcomes for managers in the pay-tv industry to take on board that stem from this research. There is a relationship between consumers' gains from using a device and their overall choice for that device; meaning that managers need to create opportunities for the consumers to evoke these feelings of enjoyment, pleasure and excitement in order to improve their chances of device choice. This could be done through the design of products or the content or final outcome that these devices are able to generate.

Managers need to be able to differentiate contextual situations that are best suited for each device and advise consumers on those devices best fitting to those situations, for example, consuming on demand content while commuting on the individual's personalised computer or laptop.

Finally, familiarity breeds adoption and use. Managers need to create opportunities for consumers to become familiar with their products to increase the chances of device choice.

7.3 Limitations

This study took place within one sample group of users of a pay-tv operator. Multiple sample groups from various pay-tv operators with the same services would allow for findings to be generalised to outside of this group. It would also be beneficial to draw a comparison to free time-shifted content from non pay-tv operators.

Only one form of time-shifted content, that is a traditional VOD content, was used and no other time-shifted content such as pay-per-view or free content was considered for this study.

Device choice was evaluated in this research and device use patterns were not established. In what order consumers choose devices would lead to new findings that would infer how they make use of time-shifted content.

The theory base for this research resided in consumer behaviour and models such as TAM (Technology Acceptance Model) and extended TAM was outside of its scope.

The study did not consider other consumer channel choice models that are available and could be evaluated.

7.4 Directions For Future Research

This research addressed the question of which device consumers will choose within the boundaries of hedonistic, utilitarian, convenience and contextual gains and motives, it did not address the trend for viewing on multiple devices simultaneously.

Phalen and Ducey (2012) addressed types of content that are being consumed on different devices and whether these are best suited for short or long video format. There are managerial implications in understanding which content type within time-shifted content is best suited for which device. A substantial amount of the literature reviewed assumed that short format video, for example series and documentaries, are more appropriate for mobile or handheld devices due to their short nature, whereas longer format video is better-suited for traditional large screen devices. An addition to this would be the different genres of content that would influence device choice, as this will inform production and broadcasting companies on the best-suited content and genres for each device.

The fragmentation of audience across devices has financial implications on advertisers who have to search for new avenues of reaching these audiences as well as broadcasters who have to re-evaluate their business models in order to be able to target these shifting audiences effectively. It would be of interest to both of these industry players to understand how consumer device choice plays a role within the shifting advertising market and what recommendations can come from that.

Venkatesh, V., Thong, J., and Xu, X. (2012) examined the role of habit on technology use and consumption and there is a notion that increased use will lead to creating a user habit. This research would benefit from establishing how much of consumer choice is driven by habit and how much of it from other external factors.

Expanding the demographics of this study may create new outcomes for understanding how consumers make decisions across different age and demographic groups. Increasing the number of statements to be tested for each proposition may yield additional data and insights. This would allow for each proposition to be interrogated from multiple angles.

7.5 Concluding Note

While television consumption has enjoyed many changes in the past few years (Doyle 2010; Lee *et al*. 2011; Montpetit *et al.* 2010) there has been a lack of research about devices that are available for television media consumption. Existing research deals with content and device characteristics and operators do not have much literature to turn to in order to examine consumption from consumers' perspectives. This research dealt with consumer behaviour constructs that have an influence on device choice and led to interesting findings supported by evidence.

This outcome is important due to the lack of existing managerial practices and information for business operating in this field. It sets the tone of future research to allow managers to experiment with options that are available to them when it comes to how consumers make the choices between different devices available to them.

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APPENDICES

Appendix A- Research Questionnaire

Introduction

Thank you for participating in this survey. This survey is being conducted as a partial requirement for an MBA programme for University of Pretoria for any users who have access to DStv Catch Up services. This research examines consumer behaviour in relation to their choice of the preferred device for catch up TV viewing. The research will be useful to TV viewers in South Africa to understand what shapes consumers decisions to watch time-shifted media on their set top box, laptop or tablet. Catch up or time-shifted TV is used to describe television content that the viewer is able to watch on his or her own time outside of the traditional linear TV broadcast. This is referred to as on demand, catch up or time-shifted television and is provided on a number of platforms, set top box, PVR, Online or on tablet or mobile devices. We highly value your responses and your contribution. The survey will take you no more than 5 minutes to complete, there are no costs and you can withdraw at any time that you desire. By taking part in this survey, you indicate that you voluntarily participated in this research. Should you have any questions please contact us on cliveco@icon.co.za or anna.vaulina@dstvo.com.

Access to DStv Catch Up content
This survey is for viewers who make active use of DStv Catch Up Services.

1) PLEASE INDICATE WHICH OF THE FOLLOWING DEVICES YOU HAVE ACCESS TO *

	Yes	No
DStv PVR		
Laptop or a PC with access to DStv Catch Up content		
Tablet with access to the DStv Guide app and Catch Up		

2) PLEASE INDICATE WHICH OF THE FOLLOWING YOU HAVE MADE USE OF IN THE LAST THREE MONTHS TO WATCH ON DEMAND/ CATCH UP CONTENT *

	Yes	No
DStv PVR		
Laptop or a PC with access to DStv Catch Up content		
Tablet with access to the DStv Guide app and Catch Up content		

Device choice use

3) PLEASE INDICATE ON A SCALE OF 1 – 5 TO WHAT EXTENT EACH ONE OF THE DEVICES IS RELEVANT TO THE ASSOCIATED STATEMENT USING THE FOLLOWING RATINGS:

Strongly Disagree = 1
Disagree= 2
Neutral = 3
Agree = 4
Strongly Agree = 5

Please answer each of the questions 1 - 13

PLEASE SELECT 99 IF YOU DO NOT HAVE/USE THE DEVICE
*

	PVR with a TV	Online Laptop/PC	iPad/Tablet
1. Watching catch up content on this device is fun			
2. You watch catch up content on this device as you're comfortable using this device			
3. Watching catch up content on this device is enjoyable			
4. You prefer to watch catch up content on this device as you're more familiar with this device or platform			
5. You like watching catch up content on this device as you feel that you have better technical knowledge of this device			
6. You prefer to watch catch up content when you're alone			
7. You prefer to watch catch up content on this device when you're with your friends or family			

8. Watching catch up content on this device is pleasurable			
9. You prefer to watch catch up content on this device when you're travelling or mobile			
10. You feel that its more exciting to watch catch up content on this device			
11. Watching catch up content on this device is entertaining			
12. You benefit from watching catch up TV on this device			
13. Watching catch up content on this device is a habit			

Overall use

4) PLEASE INDICATE ON THE FOLLOWING SCALE HOW LIKELY YOU ARE TO CHOOSE EACH CHANNEL IN GENERAL

Very Unlikely = 1
Unlikely= 2
Neutral = 3
Likely = 4
Very Likely = 5 *

	PVR with a TV	Online Laptop/PC	iPad/Tablet
Overall you are most likely to use this device/channel for catch up viewing			

5) PLEASE INDICATE YOUR AGE GROUP? *

- 15 - 24 years
- 25 - 34 years
- 35 – 49 years
- 50 years and over

6) PLEASE INDICATE HOW MANY ADULTS LIVE IN YOUR HOUSEHOLD EXCLUDING YOURSELF *

7) PLEASE INDICATE IF ANYONE ELSE IN THE HOUSEHOLD SHARES ANY OF YOUR DEVICES TO WATCH CATCH UP TELEVISION *

	Yes	No
PVR with a TV		
Tablet		
Laptop/PC		

Appendix B - Descriptive Statistics Residuals (Durbin Watson)

1. PVR

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,071	0,005	-0,001	0,636	2,104

a. Predictors: (Constant), 3.12a [PVR with a TV] You benefit from watching catch up TV on this device

b. Dependent Variable: 4a. Would choose: PVR with a TV

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,142	0,020	-0,011	0,641	2,150

a. Predictors: (Constant), 3.11a [PVR with a TV] Watching catch up content on this device is entertaining, 3.10a [PVR with a TV] You feel that its more exciting to watch content on this device, 3.1a [PVR with a TV] Watching catch up content on this device is fun, 3.8a [PVR with a TV] Watching catch up content on this device is pleasurable, 3.3a [PVR with a TV] Watching catch up content on this device is enjoyable

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,109	0,012	0,006	0,634	2,120

a. Predictors: (Constant), [PVR with a TV] Hedonic

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,066	0,004	-0,015	0,640	2,124

a. Predictors: (Constant), 3.5a [PVR with a TV] You like watching catch up content on this device as you feel that you have better technical knowledge of this device, 3.2a [PVR with a TV] You watch catch up content on this device as you're comfortable using this device, 3.4a [PVR with a TV] You prefer to watch catch up content on this device as you're familiar with this device or platform

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,002	0,000	-0,006	0,638	2,120

a. Predictors: (Constant), [PVR with a TV] Channel familiarity and convenience

b. Dependent Variable: 4a. Would choose: PVR with a TV

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,179	0,032	0,019	0,656	2,114

a. Predictors: (Constant), 3.9a [PVR with a TV] You prefer to watch catch up content on this device when you're travelling or mobile, 3.6a [PVR with a TV] You prefer to watch catch up content when you're alone

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,011	0,000	-0,006	0,638	2,119

a. Predictors: (Constant), [PVR with a TV] Contextual

2. Laptop /PC

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,287	0,082	0,054	1,209	1,680

a. Predictors: (Constant), 3.12b [Online Laptop/PC] You benefit from watching catch up TV on this device

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,700	0,490	0,402	0,962	2,191

a. Predictors: (Constant), 3.11b [Online Laptop/PC] Watching catch up content on this device is entertaining, 3.10b [Online Laptop/PC] You feel that its more exciting to watch content on this device, 3.1b [Online Laptop/PC] Watching catch up content on this device is fun, 3.3b [Online Laptop/PC] Watching catch up content on this device is enjoyable, 3.8b [Online Laptop/PC] Watching catch up content on this device is pleasurable

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,466	0,217	0,193	1,117	1,679

a. Predictors: (Constant), [Online Laptop/PC] Hedonic

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,506	0,256	0,184	1,123	1,542

a. Predictors: (Constant), 3.5b [Online Laptop/PC] You like watching catch up content on this device as you feel that you have better technical knowledge of this device, 3.2b [Online Laptop/PC] You watch catch up content on this device as you're comfortable using this device, 3.4b [Online Laptop/PC] You prefer to watch catch up content on this device as you're familiar with this device or platform

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,300	0,090	0,063	1,204	1,709

a. Predictors: (Constant), [Online Laptop/PC] Channel familiarity and convenience

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,383	0,147	0,094	1,184	1,803

a. Predictors: (Constant), 3.9b [Online Laptop/PC] You prefer to watch catch up content on this device when you're travelling or mobile, 3.6b [Online Laptop/PC] You prefer to watch catch up content when you're alone

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,383	0,147	0,122	1,151	1,810

a. Predictors: (Constant), [Online Laptop/PC] Contextual

b. Dependent Variable: 4b. Would choose: Online Laptop/PC

3. Tablet

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,294	0,086	0,048	1,093	1,641

a. Predictors: (Constant), 3.12c [iPad/Tablet] You benefit from watching catch up TV on this device

b. Dependent Variable: 4c. Would choose: iPad/Tablet

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,588	0,346	0,183	1,013	1,889

a. Predictors: (Constant), 3.11c [iPad/Tablet] Watching catch up content on this device is entertaining, 3.3c [iPad/Tablet] Watching catch up content on this device is enjoyable, 3.10c [iPad/Tablet] You feel that its more exciting to watch content on this device, 3.1c [iPad/Tablet] Watching catch up content on this device is fun, 3.8c [iPad/Tablet] Watching catch up content on this device is pleasurable

b. Dependent Variable: 4c. Would choose: iPad/Tablet

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,317	0,101	0,063	1,084	1,770

a. Predictors: (Constant), [iPad/Tablet] Hedonic

b. Dependent Variable: 4c. Would choose: iPad/Tablet

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,365	0,133	0,015	1,112	1,714

a. Predictors: (Constant), 3.5c [iPad/Tablet] You like watching catch up content on this device as you feel that you have better technical knowledge of this device, 3.2c [iPad/Tablet] You watch catch up content on this device as you're comfortable using this device, 3.4c [iPad/Tablet] You prefer to watch catch up content on this device as you're familiar with this device or platform

b. Dependent Variable: 4c. Would choose: iPad/Tablet

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,048	0,002	-0,039	1,142	1,698

a. Predictors: (Constant), [iPad/Tablet] Channel familiarity and convenience

b. Dependent Variable: 4c. Would choose: iPad/Tablet

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,423	0,179	0,108	1,058	1,589

a. Predictors: (Constant), 3.9c [iPad/Tablet] You prefer to watch catch up content on this device when you're travelling or mobile, 3.6c [iPad/Tablet] You prefer to watch catch up content when you're alone

b. Dependent Variable: 4c. Would choose: iPad/Tablet

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,216	0,047	0,007	1,116	1,556

a. Predictors: (Constant), [iPad/Tablet] Contextual

b. Dependent Variable: 4c. Would choose: iPad/Tablet

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,221	0,049	0,009	1,115	1,782

a. Predictors: (Constant), 3.13c [iPad/Tablet] Watching catch up content on this device is habit

b. Dependent Variable: 4c. Would choose: iPad/Tablet