PERCEIVED USEFULNESS OF VIDEO AND MUSIC STREAMING SERVICES AMONG GENERATION Y STUDENTS

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—Abstract—
Introduction: The digital era has changed the consumption behaviour of many consumers, especially in the entertainment industry. There has been a radical shift towards online subscription services for both music and video services. Thus, the consumption of content now happens at the demand of the consumer where they are able to watch and listen to what they want, when they want. South Africa, with an internet penetration rate of 71.4 per cent has a comparatively low adoption rate with regard to subscription services. However, the shift still remains undeniable. This study aimed to investigate the consumption habits of Millennial students situated in Gauteng province to investigate how this important generation consumes online media. A non-probability convenience sample was selected with a total of 500 questionnaires distributed. There were 425 questionnaires deemed usable after cleaning, which were analysed for reliability, validity, and correlation. The structural equation model showed that perceived ease of use and intention to use online streaming services influenced the attitude respondents held towards online streaming services. This attitude mediated towards perceived usefulness, which shows that when millennials find online streaming services useful and want to use them, they will have a positive attitude, which in turn will enable them to find these streaming services useful. As ease of use and intention are precursors to attitude, it would follow that organisations should advertise and show their services as appealing. Many subscription services do this already, where a free month, for example is given to attract customers. However, this should be accompanied by an easy to use interface, as ease of use acts as an important antecedent to retain
consumers for the long run. As there is a vast array of competition, this model offers insight into attracting and possibly retaining millennial online streaming consumers.

**Keywords:** Social media, smartphone, advocacy intention, Millennials

**JEL Classification:** M31

1. **INTRODUCTION**

The world is progressively becoming more digital (TechCentral, 2017). In these modern times, the way in which entertainment content is consumed is shifting from traditional mediums such as compact discs (CDs), digital video discs (DVDs), radio, television as well as digital satellite television (DStv) to more digital options such as audio- and video-on-demand subscription services, better known as streaming services (Bhoot, 2017). Streaming services is a service where the subscriber requests content such as a song or video, and the server supply the requested data in real-time, as it is based on streaming technology (Vilas, Pañeda, García, Melendi & García, 2005).

Streaming services are a more convenient alternative to access entertainment content than to traditional mediums such as physical video and music stores (DiscoverDigital, 2017). This service delivers the requested content over the internet to devices such as televisions, computers, laptops, smartphones, and tablets (INFONETICS, 2011). This creates the opportunity for users to consume their preferred entertainment content wherever and whenever they want, as long as an internet connection is available (Tryon, 2013:59). These services have led consumers to become more independent, as they grant users control over when, where, and how they consume entertainment content (Bond, 2015). Furthermore, indications are showing that consumers started to place a higher value on immediacy, mobility, and access they have to preferred entertainment content (PWC, 2017).

Although streaming services are still a relatively new development in South Africa (Matangira, 2018), there already has been a decline in the retailing of DVDs and CDs as the enticement of owning a physical library has become less appealing in a time where there are so many other alternative methods to access entertainment content (Allan, 2017; Ossia Records, 2017). Consequently, streaming services also affected DStv, who is South Africa’s dominant satellite pay television service, as
they suffer a substantial decline in their number of subscribers (Ndlovu, 2019). South Africa has numerous streaming services available, namely YouTube Premium, Spotify, Joox, Apple Music, Google Play Music, Deezer, Tidal, Netflix, Showmax, Google Play Movies, Disney, and Amazon Prime Video.

As streaming services are growing in popularity in South Africa, it is also becoming an increasingly competitive market as existing traditional entertainment content providers as well as new streaming services enter the market (Hedley, 2018). Therefore, it is important for marketers to understand consumers’ attitudes towards streaming services and the factors influencing those attitudes as it will be an important input when designing marketing strategies that are concentrating on encouraging continued use as well as future uptake of streaming services in South Africa.

The Generation Y cohort was targeted in this study, which comprises individuals born between the years 1986 and 2005 (Markert, 2004:21). This is because they are likely to be the generation who will be more attracted to the concept of streaming services as they have grown up in the digital age and, are technologically astute individuals (Howe, 2019). Furthermore, Generation Y consists of approximately 36 percent of the population in South Africa (Stats SA, 2018). However, the study focused more exclusively on the university portion of South Africa’s Generation Y cohort as a tertiary qualification often predicts a higher potential income with higher potential spending power and higher social status. All these factors usually translate into students being opinion leaders and trendsetters among their peers (Bevan-Dye & Akpojivi, 2016).

Concerning the technology acceptance model (TAM), perceived ease of use (PEoU) and perceived usefulness (PU) constructs play important roles in understanding individuals’ attitudes towards accepting or rejecting new technology (Davis, Bagozzi, & Warshaw, 1989). Based on the fact that streaming services are technology-based, TAM was considered to be the ideal model to use in order to improve the understanding concerning Generation Y students’ attitudes to streaming services. For this reason, the objective of this study is to determine South African Generation Y university students’ perceived usefulness of Video and Music streaming services.

2. LITERATURE REVIEW

The Technology Acceptance Model (TAM) was developed based on the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975), as an attempt to determine
why individuals accept or reject certain information technology (Park, 2009; Priyanka & Kumar, 2013:144). This model is defined as a paradigm explaining how individuals come to accept or use new information technology (Oni & Ayo, 2010). TAM does not only focus on the user’s behavioural intentions, with the emphasis on their attitude towards the technology, but also their perception concerning the usefulness of the information technology (Szajna, 1996; Cowen, 2009).

Attitude is an important dimension in several models that aims to explain consumer behaviour, which includes the theory of reasoned action (TRA) (Fishbein & Ajzen, 1975) as well as the theory of planned behaviour (TPB) (Ajzen, 1991). With regard to consumer behaviour research, attitude envisage a learned preference of the individual to behave consistently concerning a given object, whether favourable or unfavourable (Schiffman, Kanuk & Wisenblit, 2010). In the context of video and music streaming services, attitude reflects the consumers’ acceptance or rejection of these services.

Perceived ease of use (PEOU) is defined by Davis et al. (1989) as the degree to which an individual considers a specific information technology attributed product or a technologically infused product not to be too complicated to use. As a result, PEOU is an indication of simplicity in using a specific information technology system; if this system’s functions and benefits are believed not to be complex and sophisticated in its use, the likelihood for it to be adopted are more (Martin & Quan-Haase, 2013). Therefore, if an individual perceives innovative technologically infused related products as easy to use, it would reassure them to adopt it as they are likely to find it useful as well as worth their effort to learn the information technology system (Nor & Pearson, 2008; Dziak, Jachimczyk & Kulesza, 2017). Thus, PEOU leads to better performance, by having a direct effect on PU (Ho & Yang, 2015). Previous research shows that PEOU has a direct and positive influence on PU with regards to accepting new technologically viable products or services (Brezavšček, Šparl & Žnidaršič, 2014; Durodolu, 2016), as well as the successful acceptance of music and video streaming services (Ho & Yang, 2015; Pal & Triyason, 2018). Regarding streaming services, PEOU is perceived or defined as the degree to which an individual perceives using these services as being without cognitive effort (Venkatesh, Thong & Xu, 2012). Factors that may influence the PEOU of streaming services comprise the ease in which individuals can set up the services, access, and search for content, as well as the subscription payments.
Perceived usefulness (PU) is described as the degree to which an individual has confidence that a specific information technology system will lead to greater job performance (Davis et al., 1989; Venkatesh, Thong & Xu, 2012). Therefore, PU refers to the degree to which a certain information technology system will add value to individuals when performing certain activities (Venkatesh, Thong & Xu, 2012). Whenever an information technology system seems useful to an individual, the individual will tend to disregard any trouble of a complex system as the benefits are greater than the effort in using the system (De Villiers, 2016). PU can be a dependent as well as an independent variable, as it is influenced by PEOU and, at the same time PU, has an influence on an individual’s attitude towards using a particular information technology system (Davis et al., 1989; Lee, Kozar & Larsen, 2003; Koh, Prybutok, Ryan & Wu, 2010). Therefore, in streaming service adoption, PEOU and PU can be seen as the strongest predictors of an individual’s intention to use (Pal & Triyason, 2017). In steaming services, PU influences individuals’ behaviour intention to use these services (Delikan, 2010). The following factors are considered to contribute to the PU of streaming services which include the availability of content across different devices, the range and exclusivity of available content, as well as the functionalities such as the possibility to create multiple music playlists or favourite videos, series or film lists, the given suggestions based on played content as well as the ability to download content for offline usage.

3. RESEARCH METHODOLOGY

3.1. Methodology

For the purpose of this study, a descriptive research design using the single cross-sectional approach was employed. The target population was both male and female students between the ages of 18 and 24 years, enrolled at a registered public South African higher education institutions (HEIs), during the year 2018. Through non-probability convenience sampling, 500 students were selected from two HEIs situated in Gauteng province – one from a traditional university and the other from a university of technology, 250 students per campus. Fieldworkers distributed the self-administered questionnaires through the mall-intercept technique at the two HEIs. All the participants were informed that partaking in the questionnaire was strictly voluntary and that the information provided would be treated as confidential and will only be used for statistical purposes.
The self-administered questionnaire that was used to gather the required information and this comprises a cover letter, a demographic section requesting participants’ demographic information as well as a section that contained scaled-response items. The cover letter was used to explain the purpose of the study as well as to inform participants that participation was voluntary and that the responses of the participants would be confidential. Furthermore, for the scales section attitudes towards video and music streaming services were measured by using a scale adapted from Shin (2009), perceived usefulness was measured by using a scale adapted from Nysveen, Pedersen, and Thorbjørnsen (2005) as well as Wang (2015), whereas perceived ease of use was measured using a scale adapted from Wang (2015). These scaled-responses were measured on a six-point Likert scale that ranged from strongly disagree (1) to strongly agree (6).

3.2. Data analysis and results

A factor analysis was conducted and this showed that items fit into the various variables as per expectation with sufficient loadings and communalities. With the factor analysis data acceptable, the study continues with the data reliability and validity, which were measured using Cronbach’s alpha as well as the skewness and kurtosis measurement instruments. The factors in Table 1 are A = Attitude, PEOU = Perceived Ease of Use, ItU = Intention to Use, PU = Perceived Usefulness.

<table>
<thead>
<tr>
<th>Factor</th>
<th>n</th>
<th>Items in scale</th>
<th>Mean</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>425</td>
<td>3</td>
<td>4.791</td>
<td>-1.242</td>
<td>1.805</td>
<td>0.857</td>
</tr>
<tr>
<td>PEOU</td>
<td>425</td>
<td>4</td>
<td>4.695</td>
<td>-1.056</td>
<td>1.696</td>
<td>0.850</td>
</tr>
<tr>
<td>ItU</td>
<td>425</td>
<td>3</td>
<td>4.741</td>
<td>-1.142</td>
<td>1.332</td>
<td>0.833</td>
</tr>
<tr>
<td>PU</td>
<td>425</td>
<td>6</td>
<td>4.826</td>
<td>-1.354</td>
<td>2.260</td>
<td>0.919</td>
</tr>
</tbody>
</table>

As Table 1 shows, high means (discussed in 4.) were recorded for each of the variables where each variable was m > 4.6. Skewness and kurtosis showed acceptable levels except for PU’s kurtosis value, which was higher than 2. Note was taken of this but did not alter the study. Lastly, sufficient to high Cronbach alpha values were recorded, which showed that the data was reliable.
The next table shows the values for the Pearson’s Correlation Analysis.

**Table 2: Validity**

<table>
<thead>
<tr>
<th>Factor</th>
<th>A</th>
<th>PEoU</th>
<th>ItU</th>
<th>PU</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEoU</td>
<td>0.631**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ItU</td>
<td>0.661**</td>
<td>0.569**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PU</td>
<td>0.610**</td>
<td>0.601**</td>
<td>0.736**</td>
<td>1</td>
</tr>
</tbody>
</table>

Correlation is significant at the 0.01 level (2-tailed)

The correlation analysis shows that each of the variables correlated well, in the expected direction, showing nomological validity.

Table 3 shows the composite reliability, average variance extracted, as well as the correlation for the measurement model.

**Table 3: CR, AVE, Correlation, Model fit**

<table>
<thead>
<tr>
<th>Factor</th>
<th>CR</th>
<th>AVE</th>
<th>√AVE</th>
<th>Factor</th>
<th>A</th>
<th>PEoU</th>
<th>ITU</th>
<th>PU</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.752</td>
<td>0.500</td>
<td>0.707</td>
<td>A</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEoU</td>
<td>0.799</td>
<td>0.500</td>
<td>0.707</td>
<td>PEoU</td>
<td>0.724</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ItU</td>
<td>0.749</td>
<td>0.500</td>
<td>0.707</td>
<td>ItU</td>
<td>0.751</td>
<td>0.655</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PU</td>
<td>0.857</td>
<td>0.500</td>
<td>0.707</td>
<td>PU</td>
<td>0.686</td>
<td>0.671</td>
<td>0.799</td>
<td>1</td>
</tr>
</tbody>
</table>

IFI    TLI  CFI  RMSEA  SRMR
0.953  0.942  0.952  0.073  0.046

Table 3 shows acceptable levels for composite reliability. Moreover, AVE and AVE squared both show levels as per expectation, which shows that the model is reliable. Next, correlation for the model shows sufficient correlation weights. Lastly, the
model fit is above 0.9 for IFI, TLI, and CFI, and below 0.08 for RMSEA and SRMR, which suggest that the weights are acceptable.

The next figure shows the conceptual model for the study.

Figure 1: Conceptual model (PEoU = Perceived Ease of Use; ItU = Intention to Use; A = Attitude; PU = Perceived Usefulness)

Figure 1 shows the conceptual model wherein it is hypothesised that Perceived ease of use and Intention to use are mediated towards Perceived usefulness through Attitude. Table 4 below shows the outcome of the analysis for the conceptual model.

Table 4: Path estimates, SE, p, regression weights

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>SE</th>
<th>p</th>
<th>Reg weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>A &lt;- PEOu</td>
<td>0.493</td>
<td>0.071</td>
<td>***</td>
<td>0.400</td>
</tr>
<tr>
<td>A &lt;- ITU</td>
<td>0.530</td>
<td>0.054</td>
<td>***</td>
<td>0.570</td>
</tr>
<tr>
<td>PU &lt;- A</td>
<td>0.744</td>
<td>0.058</td>
<td>***</td>
<td>0.778</td>
</tr>
<tr>
<td>IFI</td>
<td>0.934</td>
<td>0.920</td>
<td>0.934</td>
<td></td>
</tr>
<tr>
<td>TLI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4 shows that the estimates and regression weights were adequate and that each path was significant. Moreover, IFI, TLI, and CFI were adequate, showing that model fit was also acceptable.
The analysis of the data as well as the conceptual model validates the data collected. Thus, it can be assumed that the conceptual model may be used to base generalisations on.

The model hypothesised that when a person feels that music and video streaming applications or services are easy to use, and they have an intention to use these services, there will be a positive effect on their attitude towards these services. After a positive attitude is fostered, individuals would perceive these services as useful. Thus, this data shows, in part that there should be intention on the part of the individual first before their attitude could be positive. In an ever-increasingly digital world, it is important for organisations pursue markets that are valuable. However, this data also shows that intention is important, thus it might be more prudent for organisations to first target those who want to make use of online streaming services.

Recommendations follow from the validated conceptual model as per Section 4. Firstly, Perceived Ease of Use showed importance in the conceptual model as well as showing high means. This shows that creating a medium that is easy to use is important. Organisations should therefore focus on discoverability, learnability, and error proneness. Which equates to ensuring that it is easy to make use of a product, even from first time use. Next, the product should be improved iteratively and in such a way that users will always be able to use it, without introducing a new learning curve. There should be as few errors as possible, and the service should help when there is an error (Ritter & Winterbottom, 2017:213). With regard to Intention to Use, a high mean (mean = 4.741) was shown, which indicates that streaming services have become much more popular and sought after. As such, Streaming services should focus on these groups instead of convincing those who still use other methods of consuming entertainment and music. Thus, target advertising towards those who want to move towards digital. Next, Attitude showed a high mean as well (mean = 4.791), as well as high correlations to the other variables. Moreover, Attitude showed significance in its mediation between PEoU and ItU towards PU. Therefore, it is imperative to balance Attitude by providing a platform that is easy to use while focussing on attracting customers who intend on using streaming services. When Attitude is not correctly managed, it could lead to a decrease (as shown in Pearson’s correlation and conceptual model) in Perceived Usefulness of streaming services. Lastly, Perceived Usefulness investigated whether individuals found streaming services useful in their lives, meaning the analyses focussed on whether it would improve their lives. Attitude showed itself
as an important role-player in this regard, meaning that the interconnectedness should not be undervalued. Moreover, the mean (mean = 4.826) for PU was the highest of the tested variables, meaning respondents felt that streaming services were indeed usefulness. However, the Pearson’s correlation showed that there is a high inter-connectedness between the variables, meaning a decrease in any of the other variables would lead to a decrease in PU. Thus, it is not only important to manage Attitudes to improve the perception of usefulness but also ensuring that digital platforms are useful to keep attitudes positive. This can also be done by decreasing the risk of usage (Rose & Fogarty, 2006:125), which many platforms already make use of such as free trials (Bowe, 2020). This risk aversive state of using technology has thus been adopted by most organisations and should continue to be used.

This study made use of non-probability, convenience sampling due to budget constraints. Moreover, the study focussed on Generation Y students, based in Gauteng. A cross-sectional research design was used to gather the data. Future studies might consider making use of probability sampling, where viable, to provide a more accurate picture of the population it wants to investigate. However, as this might prove difficult in many circumstances, a future study might simply focus on a wider generational base or juxtapose the differences in attitudes according to their generation. Lastly, a longitudinal study might prove useful as the study could measure whether attitudes shifted across time, as internet penetration and streaming services grow in depth and breadth.

REFERENCES


