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Are You Hooked on Paid Music Streaming?
An Investigation into the Millennial Generation

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ABSTRACT

The proliferation of free on-demand music streaming services (e.g., Spotify) is offsetting the traditional revenue sources (e.g., purchases of downloads or CDs) of the music industry. In order to increase revenue and sustain business, the music industry is directing its efforts toward increasing paid subscriptions by converting free listeners into paying subscribers. However, most companies are struggling with these attempts because they lack a clear understanding of the psychological and social purchase motivations of consumers. This study compares and contrasts the two different phases of Millennial generation consumer behaviors: the alluring phase and the hooking phase. A survey was conducted with 73 paying users and 163 non-paying users of on-demand music streaming services. The authors' data analysis shows two separate behavioral dynamics seen between these groups of users. While social influence and attitude are primary drivers for the non-paying users in the alluring phase, facilitating conditions and communication control capacity play critical roles for the paying users in the hooking phase. These results imply that the music industry should apply different approaches to prospective and current customers of music streaming services.

KEYWORDS

Alluring Phase, Hooking Phase, Millennial, Music Streaming Service, Online Consumer Behaviors, Subscription Business Model

INTRODUCTION

Music streaming service is an intriguing business phenomenon at the cross-section of entertainment and mobile commerce (m-commerce). Music streaming service providers typically let consumers enjoy an unlimited amount of music and/or video content, primarily through mobile devices, for a flat monthly subscription fee. According to the IFPI Global Music Report 2016 (IFPI, 2016), music streaming revenues have grown four-fold since 2011 and reached US $2.9 billion in 2015. This makes up 43% of digital music revenues, whereas the non-digital revenues have decreased by 4.5% and download revenues are down by 10.5%. Such a growth compels us to closely examine the driving factors of its business model.

Using digital subscription business models is potentially volatile and requires a firm understanding of consumers' behavioral psychology. As an example, Netflix is one notable firm that used the subscription business model. The firm's success story was prominently featured in information systems (IS) research and teaching outlets (Fichman, Dos Santos, & Zheng, 2014). However, since its initial success, the firm has been met with crises, but is thriving again with a focus on the video streaming

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business and creating original content (Favaro, 2016). Given that such a new form of subscription business model is evolving, it is timely and critical to understand consumer behaviors specifically for the music streaming business.

There are several research streams on music streaming, none more voluminous than digital music piracy. Piracy research topics include consequences and attitudes (Chiou, Huang, & Lee, 2005), ethics (Gopal, Sanders, Bhattacharjee, Agrawal, & Wagner, 2004), motivations (Borja, Dieringer, & Daw, 2015; Cesareo & Pastore, 2014; Hampton-Sosa, 2017; X. Wang & McClung, 2011), piracy deterrence (Casidy et al., 2017; Levin, Dato-on, & Manolis, 2007; Robertson, McNeill, Green, & Roberts, 2012; Sinha & Mandel, 2008; van Rooij, Fine, Zhang, & Wu, 2017), the impact on future music sales and economic impacts (Aguiar & Martens, 2016; Das, Mukhopadhyay, & Bagchi, 2014), and pricing incentives (Rayna, Darlington, & Striukova, 2015; Sinha & Mandel, 2008).

Other digital and streaming music research streams include consumer value of digital music (Bounagui & Nel, 2009; Chu & Lu, 2007), consumer behavior surrounding purchasing music downloads and purchasing from online stores (Amberg & Schröder, 2007; Bounagui & Nel, 2009), the impact of digital music streaming on physical and downloaded music sales (Aguiar & Martens, 2016; Trefzger, Rose, Baccarella, & Voigt, 2015; Wlömert & Papies, 2016), and the "freemium" pricing strategy to turn non-paying users to paying users (Hsiao & Chen, 2016; Hsu & Lin, 2016).

Related extant studies to streaming music are those pertaining to m-commerce and digital subscription business models. M-commerce studies range from its general nature and taxonomy (Balasubramanian, Peterson, & Jarvenpaa, 2002) to a user satisfaction model (Y.-S. Wang & Liao, 2007), behavioral intentions and acceptance (Kalinic & Marinkovic, 2016; Liébana-Cabanillas, Marinković, & Kalinić, 2017), and channel comparisons (Amoroso & Ogawa, 2013; Maity & Dass, 2014). Past studies also examined digital subscription business models for digital TV (Medina, Herrero, & Etayo, 2016), real estate business (Cherif & Grant, 2014), online news and online music (Lim, 2016; Swatman, Krueger, & Van Der Beek, 2006), as well as start-up newspaper business (Enkel & Mezger, 2013).

Considering past and current studies in streaming music, m-commerce, and digital subscriptions, the authors intend to make several research contributions. First, the extant studies have overlooked what leads music streaming users, in particular, Millennials, to purchase a subscription service even when a free service is available. Second, few studies have empirically looked at the specific context and behavioral drivers for the subscription model of music streaming services. Social behaviors investigated in this study are primarily about the driving factors of converting free music streaming service subscribers to paid subscribers. The music industry has been facing the rapid decline of their profit because of a much larger share of free subscribers. Without being able to convert them into paid subscribers, the music industry won't be able to sustain its music streaming services. Therefore, this study focuses on behavioral drivers for how Millennial consumers are allured into and hooked onto a music streaming service. From the IT perspective, the following research question is addressed: What key behavioral factors should music streaming services be concerned about to attract and retain prospective customers? In other words, how can companies convert Millennials from free to paid music streaming subscription services.

The plan of the remainder of the paper is as follows: First, a survey of relevant studies is conducted and hypotheses are proposed. Second, the methods and results are described. Finally, the implications and conclusions are discussed.

THEORY AND HYPOTHESES

Music streaming services are rooted in the mobile-commerce subscription business model (Coursaris & Hassanein, 2002). In other words, consumers buy the right to play an unlimited amount of music, typically using mobile devices, for a flat monthly fee.

One key perspective of the music streaming business is the economic success of the streaming business model. Upon the emergence of the internet, the music industry's major record companies saw online distribution of music as a threat (Meisel & Sullivan, 2002). With music streaming services, its on-demand streaming model became a whirlwind to the traditional music business model (Rogers, 2013).

The results of economic studies are somewhat mixed. Using Sportify's sales data, Aguiar and Waldfogel (2015) report that 137 Spotify streams reduce the traditional music track sales by 1 unit. However, another study points out that consumers with higher interest in music view steaming services as complements to licensed digital music purchases (Aguiar & Martens, 2016).

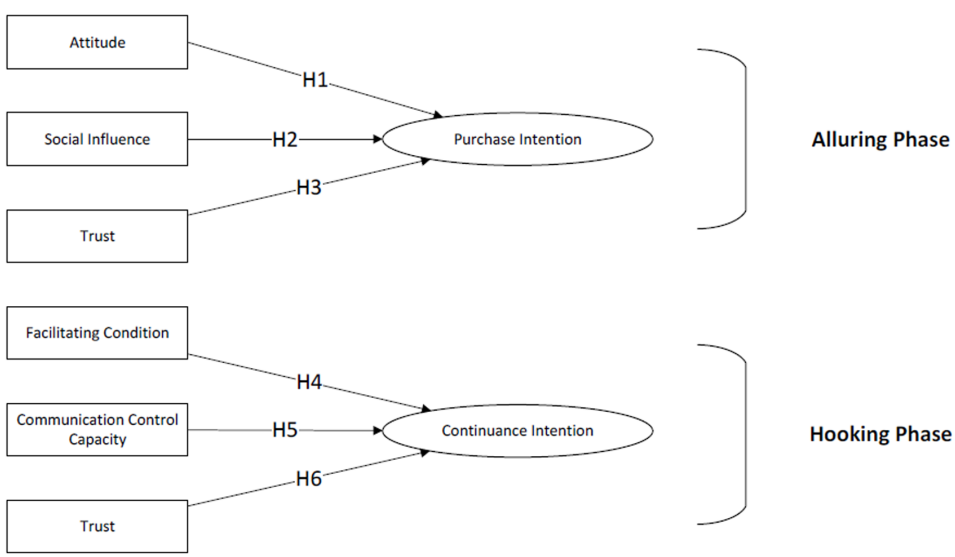
A danger to the success of the streaming service model is piracy. As an example, frequent users of music streaming are more likely to download music illegally (Borja et al., 2015).

However, an understudied aspect of music streaming research is to provide an insight into business strategy regarding how to attract and retain paying customers. This study thus focuses on music streaming, a specific type of content classified as a hedonic good, that is geared toward experiential consumption, fun, pleasure, and excitement (Dhar & Wertenbroch, 2000). Music streaming services typically offer monthly subscription plans with unlimited content use. In such a service consumption arrangement, we can logically divide the process of consumer sales into two distinct phases: the "alluring" phase, which represents the consumer's experience with the service prior to the subscription decision, and the "hooking" phase, which represents the consumer's experience with the service after the subscription decision is made.

The theoretical model (Figure 1), which guides this research, is established from theoretical foundations that are discussed next.

The key factors for the alluring phase will first be discussed, and then those for the hooking phase. Because the service is aimed toward consumers' pleasure, the following analysis focuses on factors relating to consumers' sentiments and dispositional bearings.

Figure 1. Theoretical model



ALLURING PHASE

Advertising aims to encourage favorable attitudes toward products and services to increase their potential use by consumers. (Wansink & Ray, 1996). Attitude is one of the key constructs in the theory of planned behavior (TPB) that directly influences behavioral intentions (Ajzen, 1991). As an example, the intention of travel-related online purchases is influenced by consumers' attitudes toward this type of online shopping (Wen, 2009). Interestingly, Chiu et al. (2014) reviewed six empirical studies on e-commerce. Their review indicates that the consumer's attitude toward e-commerce websites affects initial purchase intention but not repeat purchase intention.

In the context of online music access, attitude on music piracy drives the behavioral intention of actually pirating music content (Chiou et al., 2005). Another study (Borja et al., 2015) notes that frequent users of music streaming services are more likely to download music illegally than those who use music streaming services less frequently. Sinclair and Green (2015) conducted 35 qualitative interviews with consumers who had an interest in music and experience either legally or illegally downloading music. They reported that whether a consumer decides to download music legally or illegally depends on his or her attitude toward the music industry. Consumers with anti-industry attitudes are highly likely to pirate music, whereas consumers with a positive attitude toward the music industry are not likely to download content illegally.

H1: Favorable attitude toward music streaming significantly increases the extent of purchase intention of prospective music streaming customers.

Besides attitude, TPB states subjective norm is a factor that influences behavioral intention. It is defined as "the perceived social pressure to perform or not to perform the behavior" (Ajzen, 1991, p. 188). A related concept is social influence. In the context of business information system use, Vekatesh et al. (2003) define social influence as "the degree to which an individual perceives that important others believe he or she should use the new system." While the definitions of the two terms are similar, the two are differentiated by regarding social influence as influence in the context of voluntary technology use (as opposed to mandatory use for social norm). Social influence has been found to be both a determinant (Lu 2014; Wei et al. 2009) and an antecedent (Chan and Chong 2013; Sadia 2011) of m-commerce adoption, and social influence has a direct influence on a consumer's enjoyment of hedonic goods (Raghunathan & Corfman, 2006). For music streaming, positive online reviews may lead to more affirmative evaluation on a trial of a music streaming service. While the reverse can certainly be seen, most online reviews are positive (Hu, Zhang, & Pavlou, 2009; Zhao, Yang, Narayan, & Zhao, 2013). Beyond online consumer reviews, it is likely that more positive opinions are being shared by word-of-mouth, both face-to-face and online through social medial. Considering social influence beyond online media is important because studies show that face-to-face conversations with someone consumers know are generally more powerful than online reviews (Nakayama, Wan, & Sutcliffe, 2011). Social influence can also work through the power of self-observations over popularity or market share data on music streaming services. Dewan et al. (2013) note that there are two types of online social influences – observational learning influence and social network influence. Their study finds that the former has significant effects on actual music consumption, but the latter does not. Therefore, the researchers hypothesize:

H2: Social influence on music streaming significantly increases the extent of purchase intention of prospective music streaming customers.

Trust is considered a critical element to form a long-term business relationship (Campbell, Nicholson, & Kitchen, 2006). Trust is also an added variable for the technology acceptance model (TAM) to increase the degree of ease associated with the use of the system intention of (a) system

use (Pavlou, 2003), (b) online shopping (Gefen, Karahanna, & Straub, 2003), and (c) social media use (Rauniar, Rawski, Yang, & Johnson, 2014; Sledgianowski & Kulviwat, 2009). Similarly, Wen's (2009) review of 19 past studies shows that trust positively relates to consumer purchase intention. Thus:

H3: Trust in using music streaming increases the extent of purchase intention of prospective music streaming customers.

Hooking Phase

Once subscribing to a music streaming service, how do the same factors (attitude, social influence and trust) influence consumers to continue using the service? Because subscription is an act of commitment to a relationship, the commitment-trust theory (Morgan & Hunt, 1994) posits that trust must precede such an act. In the context of business information systems (IS), past studies typically find the intention of usage continuance driven by satisfaction, perceived usefulness, and subjective norm (Lee & Kwon, 2011). Unlike business IS, the use of music streaming services is motivated not by task completions but hedonic fulfillment of service subscribers. Such hedonic consumption relates to multisensory, fantasy, and emotive aspects of consumers experience with service contents (Hirschman & Holbrook, 1982). Sources or determinants of hedonic pleasure are categorized into service itself and consumers' visceral drive from service experience (Alba & Williams, 2013). Thus, the authors develop a model in which facilitating conditions (service support foundation), communication control (enabler of interactions with the service), and trust (precedent of commitment) are the key drivers for the continuance intention for music streaming services.

Facilitating conditions are "factors and resources that an individual believes exist to support his or her activities" (C.-M. Chiu & Wang, 2008, p. 196). In the Unified Theory of Acceptance and Use of Technology (UTAUT), facilitating conditions are a non-significant factor for behavioral intention because effort expectancy, or "the degree of ease associated with the use of the system," captures the effect of facilitating conditions (Venkatesh et al., 2003). On the other hand, the e-commerce website Amazon.com is found quite usable due to their user interface designs (Kumar, Smith, & Bannerjee, 2004). Music streaming applications are much easier to use without significant training than traditional information systems such as enterprise resource planning (ERP) systems. If ease of use is not a major challenge for service applications, we should consider facilitating conditions as a critical factor for their continuing use. Without sufficient support, it would be challenging to keep using music streaming services or any other types of services however much training is needed for use. Similarly, continual use intention is likely enhanced if support factors and resources are available. Indeed, extant studies find facilitating conditions to be a significant factor for document management systems (Bhattacherjee, Perols, & Sanford, 2008), e-government systems (Venkatesh, Thong, Chan, Hu, & Brown, 2011), knowledge management systems (He & Wei, 2009), and web-based learning (C.-M. Chiu & Wang, 2008).

H4: Facilitating conditions for music streaming significantly enhance the continuance intention of music streaming service use.

The need for communication control arises from service users' need to maximize the potential of the medium through which they receive the contents of the service. For example, instant messaging (IM) users appreciate "the ability to manage communication pace, the length of interaction time, response timing, using and switching among features for the purpose of fully expressing a user's intention, and presenting the desired images during an online interaction" (Sheer, 2011, p. 84). IM communication control includes the ability to choose favorable IM users and avoid undesired ones, and the functionality to allow anonymity and to recover from an online faux pas. In the context of m-commerce, Zhou and Lu (2011) report that factors of interactivity such as ubiquitous connectivity

and perceived control enhance shopping enjoyment. This, in turn, will likely increase the intention of repeat shopping. The same is true for IM: once enjoyment is experienced, continuance intention is significantly increased (Song & Wang, 2011). Music streaming service involves significant interactivity just as in IM and m-commerce. According to Morris and Powers (2015, p. 110), music streaming services is "an ambitious effort toward re-imagining the consumption of music as an experiential brand" that highlights the *control* over music choice and platforms. It is thus reasonable to assume that communication control capacity leads enjoyment, which in turn enhances the continuance intention of music streaming service use.

H5: Communication control capacity on music streaming significantly enhances the continuance intention of music streaming service use.

Satisfaction can be a focal variable in determining consumers' continuance intention toward music streaming service as a hedonic good. However, trust is chosen over satisfaction as a key variable in our model. First, subscription is a type of contractual relationship. Trust is an essential element of a successful relationship (Garbarino & Johnson, 1999). Second, satisfaction can be measured on the basis of the consumer's pleasure with the product or service itself or on the basis of the consumer's experience in receiving the product or service. In the context of the music streaming service industry, overall satisfaction can be understood as the aggregate of consumers' satisfaction with the product itself (the music content), and the interface through which it is consumed (the music streaming service). This aggregation may be problematic given the affective nature of music and the cognitive nature of service attributes (Oliver, 1993). Lastly, aggregated or disaggregated satisfaction can have a halo effect or multicollinearity over variables characterizing a relationship such as communication and shared value (Vatanasombut, Igbaria, Stylianou, & Rodgers, 2008), possibly including trust.

Extant studies find that trust is a significant enhancer of consumers' continuance intention toward mobile payment services (T. Zhou, 2013), online banking (Vatanasombut et al., 2008), and online auctions (J.-C. Wang & Chiang, 2009). In addition, Fang and Chiu (2010) study online knowledge exchange among programmers, and find that trust in members and their management drive fair knowledge sharing, which in turn, determines consumers' continuance intention toward online knowledge sharing systems.

H6: Trust in using music streaming services significantly enhances the continuance intention toward music streaming service use.

METHOD

Participants and Procedure

A total of 244 college students in the College of Business of a state university in the Southeast region of the United States participated in the study. College students were chosen as subjects for this study for two reasons. One, the millennial generation is now America's largest generation and their purchasing power is important to company executives, marketers and researchers (Henderson, 2016). Two, according to Ipsos (2016), one-third of 16-24 year olds use paid streaming music service, and its growing popularity is found especially in the under 25 age group. For these reasons, the study chose to collect data through a survey questionnaire from college students. Juniors and seniors were recruited from nine sections of management information systems and marketing core courses in the spring and fall semesters of 2016. Participation was voluntary. However, students could earn an extra credit (0.5% of their final grade) if they choose to participate.

Students who volunteered for the study were given a URL to SurveyMonkey to complete the survey. Survey questions were developed from previous research studies and reviewed by three

marketing and information technology experts. The survey was pretest on similar subjects with only non-substantive changes being made.

Two hundred forty-four responses were collected and one of those was discard because it was incomplete. Additionally, since the study was concerned with Millennials, seven respondents who were born prior to the beginning of the Millennial generation, 1980 and earlier were removed from the analysis (Pew Research Center, 2011). A final sample of 236 valid questionnaires was used in the present study. The profile of the respondents is summarized in Tables 1-5.

VARIABLES

The constructs of (latent) variables are summarized in Table 6. Variables from previous studies were selected as described in the hypotheses section. Several control variables were selected too. Gender is a significant factor for consumers' willingness to pay for digital content, according to Punj's (2015) study. A study by McNamara and Ballard (1999) revealed that men and women differed significantly in music preference. Men showed a preference for more arousing music than women did. Accordingly, gender is used as a control variable. Further, masculinity/femininity is used as a control variable to

Table 1. Profile of survey respondents- part 1

Gender	Frequency	Percent
Male	142	60.2
Female	94	39.8
Total	236	100.0

Table 2. Profile of survey respondents- part 2

Age	Frequency	Percent
18-24 years old	224	94.9
25-34 years old	12	5.1
Total	236	100.0

Table 3. Profile of survey respondents- part 3

Longevity of Smart Phone Use	Frequency	Percent
Under 6 months	4	1.7
6–12 months	6	2.5
1–3 years	67	28.4
4–6 years	132	55.9
Over 7 years	27	11.4.
Total	236	100.0

Table 4. Profile of survey respondents- part 4

Device OS	Frequency	Percent
iOS (Apple's iPhone)	184	78.0
Android	40	16.9
Windows Phone	3	1.3
Other (please specify)	9	3.8
Total	236	100.0

Table 5. Profile of survey respondents- part 5

User Type	Frequency	Percent
Non-Paying User	163	69.1
Paying User	73	30.9
Total	236	100.0

measure the psychological effects of gender as opposed to biological effects (Srite & Karahanna, 2006). Masculinity/femininity refers to whether an individual espouses masculine values (being aggressive) versus feminine values (being nurturing) (Hofstede, 1980).

In addition, the frequency of music listening using mobile devices (5-point Likert scale: always, often, sometimes, rarely, or never) as a control variable is included. The variables are entered into two stepwise OLS regressions to test the hypotheses. OLS regression is an appropriate analysis method given our research question and hypotheses.

RESULTS

The measurement items showed high levels of internal consistency reliability, with Cronbach's α values ranging from 0.802 to 0.948 (Table 6), which are above the cutoff value of 0.70 (Hair, Tatham, Anderson, & Black, 2006; Numally, 1978). The loadings and cross-loadings of factor analysis show that each item loads highly within its corresponding latent constructs showing sufficient discriminant validity (Table 7). Indicator reliability can be assumed if all indicator loadings are above the threshold value of 0.70 (Chin, 2010; Hair et al., 2006). However, one item (CCC1) is less than .70 at .67. The researchers chose to keep this item because loadings of .50 and greater are considered practically significant (Hair et al., 2006).

In determining whether the two regression models, alluring and hooking phase models, are acceptable for prediction purposes, tests for OLS assumptions were conducted and were found to be acceptable. There was no indication of non-normality, non-linearity, heteroskedasticity, or dependence of error terms. To determine model fit and usefulness of the regression models, a check of adjusted R^2, the F-value and the coefficient of variation were conducted (Tables 8 and 10). Multicollinearity was analyzed using Variance Inflation Factor (VIF) and all are well below 10 (Hair et al., 2006). Tables 9 and 11 show the VIFs are no higher than 1.3. This suggests the absence of multicollinearity in the models.

Since independent and dependent variables were collected from the same survey instrument, a number of steps were taken to minimize the occurrence of common method variance. The survey was developed and administered in accordance with recommendations from Podsakoff, MacKenzie, Lee, and Podsakoff (2003). Careful attention was given to the order and position of the survey items to create temporal distance. Harman's single-factor procedure was also conducted for both models

Table 6. Construct of latent variables

Latent Variable	Construct	Reference
Attitude Toward Paid Streaming Service (ATT) 4 items α = 0.925	Paying for a premium music streaming service is a good idea. I am favorable toward paying for a premium music streaming service. Paying for a premium music streaming service is a wise idea. I feel positive about paying for a premium music streaming service.	Kim (2009)
Communication Control Capacity (CCC) 4 items α = 0.810	On my mobile music app, I feel I have full control over the songs I intend to listen too. On my mobile music app, I can control music listening pace. On my mobile music app, I can control the length of the music streaming service. On my mobile music app, I can control the use of the mobile music app features at will.	Sheer (2011)
Continuance Intention (CI) 2 items α = 0.948	I plan to keep using my mobile music app in the future. I expect the use of my current mobile music app to continue in the future.	Zhou, Fang, Vogel et al. (2012)
Facilitating Conditions (FC) 3 items α = 0.807	I have an internet-enabled mobile phone for accessing music streaming services. Given the resources, opportunities, and knowledge required, it would be easy for me to use a mobile music service. I have the knowledge necessary for using a mobile music app.	Venkatesh et al. (2003)
Masculinity/Femininity (MF) 3 items α = 0.802	It is preferable to have a man in high level position rather than a woman. There are some jobs in which a man can always do better than a woman. It is more important for men to have a professional career than it is for women to have a professional career.	Srite and Karahanna (2006)
Purchase Intention (PI) 2 items α = 0.941	Given the chance, I intend to pay for a premium music streaming service. I intend to purchase a premium music streaming service.	Everard and Galletta (2005)
Social Influence (SI) 3 items α = 0.826	People who influence my behavior think that I should pay for a premium music streaming service. I believe I should pay for premium music streaming services because many of my friends pay for those services. People who are important to me think that I should pay for a premium music streaming service.	Venkatesh et al. (2003)
Trust (T) 4 items α = 0.869	The privacy policy of mobile music apps regarding the use of my personal information, makes me feel the shopping store is trustworthy. The privacy policy of mobile music apps regarding the notices of personal information collection makes me feel the shopping store is trustworthy. The security policy of mobile music apps makes me feel the shopping store is trustworthy. The privacy policy of mobile music apps regarding how they will share my personal information with third parties makes me feel the shopping store is trustworthy.	McKnight, Choudhury, and Kacmar (2002)

and it was found that a single factor accounts for less than the majority of the variance at 42.85% (Alluring Phase) and 25.33% (Hooking Phase) (Podsakoff et al., 2003). Using separation and statistical methods provides added confidence in our research findings.

Two separate regressions were tested, one for the non-paying users in the alluring phase and one for the paying users in the hooking phase.

Table 7. Item loadings

Constructs and Items	Loadings
Attitude Toward Paid Streaming Service (ATT)	
ATT1_Paying for a premium music streaming service is a good idea.	.926
ATT2_I am favorable toward paying for a premium music streaming service.	.873
ATT3_Paying for a premium music streaming service is a wise idea.	.892
ATT4_I feel positive about paying for a premium music streaming service.	.886
Communication Control Capacity (CCC)	
CCC1_On my mobile music app, I feel I have full control over the songs I intend to listen too.	.670
CCC2_On my mobile music app, I can control music listening pace.	.863
CCC3_On my mobile music app, I can control the length of the music streaming service.	.765
CCC4_On my mobile music app, I can control the use of the mobile music app features at will.	.849
Continuance Intention (CI)	
CI1_I plan to keep using my mobile music app in the future.	.958
CI2_ I expect the use of my current mobile music app to continue in the future.	.962
Facilitating Conditions (FC)	
FC1_I have an internet-enabled mobile phone for accessing music streaming services.	.813
FC2_Given the resources, opportunities, and knowledge required, it would be easy for me to use a mobile music service.	.858
FC3_I have the knowledge necessary for using a mobile music app.	.857
Masculinity/Femininity (MF)	
MF1_It is preferable to have a man in high level position rather than a woman.	.885
MF2_There are some jobs in which a man can always do better than a woman.	.796
MF3_It is more important for men to have a professional career than it is for women to have a professional career.	.848
Purchase Intention (PI)	
PI1_Given the chance, I intend to pay for a premium music streaming service.	.967
PI2_I intend to purchase a premium music streaming service.	.967
Social Influence (SI)	
SI1_People who influence my behavior think that I should pay for a premium music streaming service.	.853
SI2_I believe I should pay for premium music streaming services because many of my friends pay for those services.	.767
SI3_People who are important to me think that I should pay for a premium music streaming service.	.898
Trust (T)	
T1_The privacy policy of mobile music apps regarding the use of my personal information makes me feel the shopping store is trustworthy.	.905
T2_The privacy policy of mobile music apps regarding the notices of personal information collection makes me feel the shopping store is trustworthy.	.928
T3_The security policy of mobile music apps makes me feel the shopping store is trustworthy.	.869
T4_The privacy policy of mobile music apps regarding how they will share my personal information with third parties makes me feel the shopping store is trustworthy.	.747

ALLURING PHASE

The first regression (F = 40.66, *df* = 5, p = 0.000) was run to test H1 through H3 (Table 8). Adjusted-R^2 was 0.595. Table 9 shows the regression with three independent variables (attitude, social influence, and trust) and two control variables (masculinity/femininity, frequency of online music listening). Attitude (standardized coefficient or β =0.598, p = 0.000), social influence (β =0.145, p = 0.022), and trust (β =0.177, p = 0.003) are all significant, supporting H1, H2 and H3. The standardized coefficients of two control variables are 0.162 (p = 0.004) for masculinity/femininity, and 0.150 (p = 0.009) for the frequency of online music listening.

HOOKING PHASE

To test H4 through H6, a second regression was performed (F = 9.14, *df* = 4, p = 0.000, adjusted-R^2 = 0.330) using 3 independent variables (facilitating conditions, communication control capacity, and trust) and two control variables (masculinity/femininity, frequency of online music listening). Tables 10 and 11 show the results. The multicollinearity among those variables is not an issue since all variance inflation factors (VIFs) are 1.104 and less, well below 10 (Hair et al., 2006). The results support H4 (facilitating conditions) with β = 0.322 and p = 0.003, H5 (communication control capacity) with β = 0.264 and p = 0.013, and H6 (trust) with β =0.237 and p = 0.022. One control variable (frequency of online music listening) was a significant variable with β = 0.241 and p = 0.026.

In relation to the discussion about H6, excluding satisfaction as a variable was the right decision. Satisfaction was measured using the construct used by Kim and Son (2009). (Two items were used, "In general, I am satisfied with my experience of using free, or premium, music streaming services," and "Overall, I am pleased with free, or premium, music streaming services," using a 5-point Likert scale, "strongly agree" through "strongly disagree" with Cronbach's α = 0.854.) The correlation between satisfaction and trust was 0.252 (p = 0.035). The correlation between satisfaction and facilitating condition was 0.439 (p = 0.000). This aligns well with our rationale on excluding satisfaction as a key variable for our model.

Table 8. Regression results alluring phase

	SS	df	MS	F	Sig.
Regression	293.00	5	58.80	40.66	0.000
Residual	188.01	130	1.45		
Total	482.00	135			

Dependent variable: Purchase Intention (PI) of prospective customers
Adjusted R^2 = 0.595

Table 9. Regression coefficients alluring phase

	Independent variable	Beta	t	Sig.	VIF
(Constant)			-4.184	0.000	
ATT	Attitude	.598	9.593	0.000	1.296
SI	Social Influence	.145	2.320	0.022	1.300
MF	Masculinity	.162	2.913	0.004	1.034
Trust	Trust	.177	3.024	0.003	1.136
DQ_FU	Frequency of Music Listening	.150	2.653	0.009	1.071

Table 10. Regression results hooking phase

	SS	df	MS	F	Sig.
Regression	91.97	4	22.99	9.14	0.000
Residual	155.97	62	2.52		
Total	247.94	66			

Dependent variable: Continuance Intention (PI) of current paid customers
Adjusted R^2 = 0.330

Table 11. Regression coefficients hooking phase

		Beta	t	Sig.	VIF
(Constant)			0.282	0.779	
FC	Facilitating Conditions	0.322	3.080	0.003	1.077
CCC	Communication Control Capacity	0.264	2.569	0.013	1.042
Trust	Trust	0.237	2.344	0.022	1.004
DQ_FU	Frequency of Music Listening	0.241	2.278	0.026	1.104

IMPLICATIONS

The results provide several major implications. First, there are significant differences between the alluring and hooking phases of music streaming services from the behavioral psychology perspective of their consumers. While the alluring phase is driven by attitude toward music streaming (β =0.558) and social influence (β =0.143), the hooking phase is sustained by facilitating conditions (β =0.626) and communication control capacity (β =0.371). Second, the link between the two phases is the importance of trust in using streaming services (β =0.186 for the alluring phase, and β =0.211 for the hooking phase). Third, these results suggest that consumers' internal motivations prompt the initial use of music streaming services. The results also show that the enabling factors (facilitating conditions and communication control capacity) of self-control to enjoy the service keep consumers using the service. This is demonstrated by the magnitude of β for attitude (β =0.558) being twice the size of β for social influence (β = 0.143) and trust (β = 0.186). Fourth, psychological gender factor (masculinity/femininity) are found to be significant control variables. This matches the results reported by Punj's (2015) study on consumer intentions of general digital content subscriptions.

With respect to the findings from extant studies, our results confirm that attitude affects only initial subscription intention but not continuance intention, just as Chiu et al. (2014) summarized. In the context of online games, the study done by Chang et al. (2014) reported that social influence is a significant factor for continuance intention. In our model, social influence is not a significant factor for the hooking phase; however, it *is* significant for the alluring phase. This is probably because Chang et al.'s study focused on online multi-player games that necessarily involve social interaction. The use of on-demand music streaming services does not, once users are in the hooking phase.

Implications for Practitioners

The nature of music streaming service is self-enjoyment motivated, experienced and maintained by individual customers. Because the factors for attracting and retaining consumers are different, service providers should first focus on advertising to foster positive attitudes and social influences by getting consumers to fantasize about the convenience of music enjoyment anytime, anywhere. Then, providers should continue improving the streaming functionality for maximum convenience

to search, access and play music at consumers' fingertips. While the influential factors for the two phases vary, trust is an important common link between the alluring and hooking phases. Developing and building trust through a strong brand image is critical. This assures both prospective and current customers of the streaming service.

Implications for Researchers

Previous studies primarily examined online digital music issues from the piracy perspective. This paper diverges from this perspective and adopts multiple perspectives to examine online digital music services. First, this study contributes to the debate on the challenges of converting free music streaming service subscribers to paid subscribers. Second, this study models purchase intention and continuance intention separately. Third, this study empirically examines the conversion process of music streaming service subscription of the Millennial generation. These three perspectives are scarce in current literature.

A major theoretical contribution is the adoption of a two-phased model to address the conversion challenge. Our findings suggest that Millennial streaming music users who intend to purchase are influenced by different factors than users who show continuance intentions. However, trust is a common factor. The proposed model integrates TPB (Ajzen, 1991), TAM (Venkatesh et al., 2003), social influence (Venkatesh et al., 2003), and trust (Lankton, McKnight, & Tripp, 2015) theories. Our findings suggest that attitudinal and social factors are conducive to the initial adoption of music streaming services, but facilitating and communication factors contribute to the continuance intention. This difference could be attributed to cost and functionality factors. While there is no cost to participate in the free service and it is likely that a user's attitudes and social influences are enough to try the free service, ultimately the streaming service has to perform well in order for the user to continue paying for the service.

Trust is an indispensable common factor for the conversion process in both initial and post-adoption phases. This corroborates with findings of previous studies on the adoption of innovative information systems, such as smart grid (Ponce, Polasko, & Molina, 2016), e-learning systems (Dawei Liu & Xiaohong Guo, 2016), and mobile payment systems (Daştan & Gürler, 2016). Whether the service is free or not, if a user does not feel their privacy is being protected, the user is likely to abandon the music streaming service.

The study also found that Masculinity/Femininity is conducive to the initial adoption of music streaming services, but does not contribute to continuance intention. The Masculinity/Femininity construct is a cultural view that is closely related to attitudes and social norms, which have been shown to be antecedents to purchase intention. While these constructs help explain purchase intention, masculinity/femininity does not lead to continuance intention. It is our belief continuance intention centers on the functionality and cost of the streaming service rather than attitudes and social influence.

LIMITATIONS AND FUTURE RESEARCH OPPORTUNITIES

While this study focused on the Millennial generation, the findings based on the homogeneous data set may not reflect the diversity of other music streaming service subscribers. The conversion intention of subscribers could vary with age, income, parental status, residential status, marital status, and education. Collecting data from a wider range of users to reflect these demographical differences would benefit future research. Furthermore, although subjects were asked to report the different types of music streaming services that they used, service type was not used as a control variable and its potential influence on our proposed relationships was not assessed because of the smaller sample size. Additionally, subjects were not asked which type of music they listen to. This could potentially be a deciding factor of continuance intention. Scholars interested in the potential effect of this control variable may want to increase their sample size in major music streaming service types (e.g. Spotify vs. Pandora) for the purpose of comparison. Another approach to conducting empirical research

would be to cooperate with an actual music streaming service provider to examine (a) the difference between intentions and actual consumer behaviors, and (b) the relationship between streaming volumes (e.g., "high" streaming group vs. "low/sporadic" streaming group) and our two-phased model. Future research should examine the applicability of our theoretical model in the context of online magazine subscription, digital video streaming, combo-package subscription of audio and video services, and possibly online educational content distribution services. Music streaming services are still evolving with advanced features (e.g. combining personal collection on the cloud with the streaming catalog, pop-up lyrics, integration with social media). These features can further facilitate and ease the use of music streaming services, and eventually provide an even richer data set to analyze issues related to the process of converting free listeners to paid subscribers.

CONCLUSION

The new demand for internet-based media has led to changes of entire business models in the music industry (Hess, Matt, Benlian, & Wiesböck, 2016). One of the rising stars among the new media is the music streaming service business. One understudied aspect of such business is how differently its service providers should attract and retain customers as they did with the traditional economic business perspective. The results of this study point to the importance of being attuned to consumers' internal psychological drive to attract and retain music streaming service customers. Thus, a two-phased model is proposed: the alluring phase and the hooking phase. The alluring phase is driven by attitudinal drive, social influence, and trust in using streaming services. The hooking phase aims at increasing the continuance intention of consumers by focusing on enabling factors such as user interface functionality and communication control capacity. The link between these two phases is consumers' trust. Our theoretical model focuses on variables relating to behavioral psychology of consumers, and may be relevant for other types of digital subscription services. Future studies can test the external validity of our model. Also, researchers can enhance our model with variables associated with the 4 P's (product or content category, place or geographic locations of consumers, price, promotion) of streaming service business marketing.

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ENDNOTE

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