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**Paying for music and more: Investigating drivers and
inhibitors of purchase intention for music streaming
services in China**

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Abstract

Objectives

Music streaming has become one of the most common ways of listening to music in today's world. However, the paid penetration rate of Chinese music streaming services (MSS) is nearly five times lower than Spotify, and MSS subscription is a relatively new consumption practice that has not yet been fully explored in marketing and consumer research. This study aims to determine the drivers and inhibitors of the Chinese consumers' purchase intention for MSS based on a research model integrating the Social Cognitive Theory (SCT) and Value-based Adoption Model (VAM).

Methods

A quantitative survey method targeting Chinese individuals (N=461) was conducted. The collected data were analysed through a three-step hierarchical regression analysis to test the association between purchase intention for paid MSS and usefulness, enjoyment, perceived ease of use, perceived monetary cost, music affinity, attitude towards copyright, attitude towards MSS subscription, descriptive norms, and habit of unpaid listening.

Results

The final model could explain 69.1% of the variance in PI for paid MSS. After factor analysis, attitude towards MSS subscription was merged with PI. The factors of usefulness, enjoyment, music affinity, attitude towards copyright, descriptive norms, and income level were shown as the drivers of purchase intention, and perceived monetary cost and habit of unpaid listening were found to be the inhibitors of purchase intention for MSS. Moreover, the mediating role of habit of unpaid listening, perceived monetary cost, usefulness and enjoyment were also demonstrated.

Conclusions

This study proves VAM as a robust theory in predicting purchase intention in the Chinese MSS context and recommends categorising perceived ease of use as an antecedent of usefulness and

enjoyment. SCT is also demonstrated as a valuable addition to the VAM model and able to serve as a comprehensive theoretical framework. This study provides findings as the basis for future research in the MSS domain and practical suggestions for MSS providers in China.

Keywords: music streaming services, purchase intention, social cognitive theory, value-based adoption model

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1 Introduction

With the development of information and communication technology, music streaming have become the latest development stage of the music industry (Prey, Esteve Del Valle, & Zwerwer, 2020). After over a decade's decline, global recorded music revenue has increased for six consecutive years, mainly driven by the growth of MSS revenue (IFPI, 2021). In today's China, physical records revenues only occupy 2.6% of the recorded music market, and consumers have widely adopted MSS since the 2000s (Pastukhov, 2019). Seeing the crucial role of MSS in the music industry, there has been an increasing interest in this digital dissemination form and business practice (Burkart, 2014).

Due to protectionist policies, most international MSS are not available in China, and Chinese consumers mainly use domestic MSS. In 2015, the copyright department of the Chinese government banned the unauthorised distribution of copyrighted music, trying to switch digital music from free to paid content for the first time in China, but consumers' habit of listening to music for free remains (Xiang, 2016). Although China is home to over 650 million MSS users (Thomala, 2021a), the percentage of users subscribing to the leading MSS in China was only 10.6% and way lower than Spotify's 45% premium penetration rate in 2021 (Tencent Music Entertainment, 2021; Dean, 2021). The current growth of music streaming markets in China is mainly powered by user increase, which is gradually reaching a plateau period (Pastukhov, 2019; iiMedia, 2020). Therefore, more than ever, research is needed to understand the perceptions and needs of Chinese MSS consumers to expand paid user base and sustain the music streaming business.

Moreover, despite the rise in MSS revenues, musicians in China are still not fairly compensated, and around 52% of Chinese musicians received no income from their music career in 2020 (Communication University of China, 2020). Other than streaming revenue needs to increase, this is also due to the lack of remuneration distribution provisions for copyright holders at the legal level (Herlihy & Zhang, 2016), and the controversy on the MSS royalty sharing system has not been resolved until now. To improve the revenues of copyright holders, getting insights into people's attitudes towards copyright and purchase behavioural

intentions of consumers becomes essential to drive change in the music industry through the consumer's demand.

In literature, the Value-based Adoption Model (VAM) is widely used in the MSS field, which regards MSS as a form of technology and investigates consumer's purchase intention from a rational cost-benefit analysis standpoint (Wang et al., 2013; Guerra, 2015; Fernandes & Guerra, 2019; He et al., 2021). VAM is a powerful consumer behaviour theory, but it does not include the element of social influence, which is pertinent in this research area due to the growing popularity of social features on MSS. Also, according to Zhang (2015), the consumption pattern of Chinese consumers is more complicated than solely value trade-off and is highly influenced by social environments.

Social Cognitive Theory (SCT) is a comprehensive behavioural theory that includes the perspective of environmental elements and can bridge the deficiencies of the VAM model for better applicability in the Chinese MSS context. SCT has demonstrated a strong ability in predicting piracy behaviours (Lowry et al., 2017), which means it has great potential to predict paid MSS adoptions because pirating and music streaming are alternative options for consumers. However, no previous study has adopted it to research MSS purchase behaviour. This paper seeks to address this research gap by proposing a refined model that integrates the SCT and VAM theories to explore the Chinese consumer's intention, contributing to MSS consumer behaviour research.

Whilst some research has been carried out on digital music topics in Chinese academia; little empirical research has explored MSS from the consumer's perspective (Xiang, 2016; Z. Wang, 2019). Under the trend of implementing paid music streaming in China, the importance of end consumer research should be emphasised to provide a theoretical basis for practice. Hence, the objective of this paper is to explore what factors influence Chinese consumers to pay for MSS, hoping to provide service providers and policymakers with practical managerial suggestions based on a better understanding of consumers. Accordingly, the main research question this paper attempts to answer is: *From an SCT and VAM perspective, what are the*

drivers and inhibitors of the Chinese consumers' purchase intention for music streaming services?

2 Theoretical framework

To answer the research question, the research context of MSS in China and its free alternative digital piracy is elaborated, followed by the definition of the dependent variable purchase intention, the theoretical framework, along with the research model and hypotheses. The SCT theory and VAM model are integrated into the theoretical framework, in which the VAM model serves as a key component of the SCT theory.

2.1 Research context

There are numerous special circumstances of MSS in China, including the closed domestic market, the similar functionality of different service tiers, intense exclusive copyright competition, and fledgling copyright legislation. Such a unique MSS context will be explained by a descriptive approach in the following section.

2.1.1 MSS in China

Conceptually, MSS are content services that deliver music to end-users through the internet without downloading audio files (Doerr, Benlian, Vetter, & Hess, 2010). This paper focuses on investigating on-demand MSS (e.g. Spotify), which allow users to choose what music is played from a vast catalogue and are the most popular online music services in this age (Marshall, 2015; Voigt et al., 2017). The current landscape of the streaming music market in China can be described as an oligopoly market, where Tencent Music Entertainment (TME) acquired QQ Music, KuGou Music, and Kuwo Music, accounting for 71% of the market share and taking the lead over other service providers (Shen & Feng, 2021). Note that global competition is absent in China owing to the Chinese government's protectionist policies, and currently, Apple Music is the only international music streaming service available in China (Pastukhov, 2019).

On-demand MSS generally adopt a flat-rate subscription business model that requires consumers to pay a periodic subscription fee for using the services (Nelson et al., 2010). Unlike traditional music consumption, customers do not obtain any music ownership by subscribing to paid MSS; instead, they obtain temporary access to music content and advanced services (Wlömert & Papies, 2016). MSS subscriptions are typically divided into two revenue models: paid subscription and freemium (Massarotto, 2021). Apple Music is the only exception of using a paid subscription model in China, which requires subscription payment before offering access to its music catalogue (Chang et al., 2021), and most MSS providers in China operate on a freemium model.

The freemium music platforms in China normally provide three tiers of services: free, paid music and VIP (for example, see Table 1). First, the free tier users can play music on-demand from a limited music library. Second, the premium music tier offers access to a full music library with lossless audio quality and offline listening. Third, the VIP tier contains the paid music content and further includes various benefits, such as customised decorations, sound effects, discounts for concert tickets, and so forth. In this paper, both the paid music tier and the VIP tier of the freemium MSS are considered paid MSS. The functions of the three tiers are also consistent when using different operating systems.

Table 1

The Business Model of QQ Music

Service content	QQ Music service tiers		
	Free	Paid music	VIP
Price (CNY per month)	0	8	12
On-demand streaming	✓	✓	✓
Full music library		✓	✓
Paid music downloading		✓	✓
Lossless audio quality		✓	✓
Concert ticket discount			✓
Ringtone setting			✓
Sound effects			✓
VIP badges			✓
Customised decorations			✓

Regarding marketing strategy, freemium MSS in China offer discounts on first-time, quarterly and yearly subscriptions, but does not provide a free trial for the paid version. This may cause psychological reactance on consumers who are unfamiliar with MSS functions and cautious about perceived monetary cost. Some major MSS in China create a VIP level system, in which VIP users can accumulate experience and acquire virtual or physical benefits when levelling up (QQ Music, 2021). Aside from subscriptions, these MSS also provide single and album purchases for permanent listening and unencrypted music audio file downloading.

Different from Spotify, although most MSS in China use splash screen and banner advertisements, they do not bother free users by advertisement interruption in the middle of listening or song skipping. Therefore, it can be seen that there is hardly any differentiation for the core system functionality in these service tiers. Since the main paid feature is premium music content, MSS providers in China focus on attracting paid users by selling exclusive music catalogues. The copyright resources thus become imperative, while TME controls 80% of the music copyrights streamed in the domestic market (Deng, 2021). In such a market environment, however, the user experience has fallen victim to the copyright business war as users must switch between apps and pay multiple subscription fees for a complete music library, reducing the convenience and content accessibility of MSS. Undoubtedly, service providers still need to find a new direction to attract paid users.

2.1.2 Digital music piracy

Because exclusive copyrights are the core feature of paid MSS in China, piracy as an alternative to music content access is worth attention. Before digitalisation, China had already a long history of rampant piracy, from book publishing to physical recordings (Y. Wang, 2017). In the 2000s, free music streaming and download services became commonplace in China, which did not acquire licenses nor share their financial benefits with copyright holders (Herlihy & Zhang, 2016). A report from IFPI (2008) shows that 99% of all streamed music in China was pirated at that time. But many consumers simply unknowingly conducted piracy behaviour by using these popular services (Xiang, 2016).

This type of industry ecosystem continued until 2015 when the Chinese government enacted legal provisions to ban unauthorised digital music distribution and removed 2.2 million unlicensed songs from online platforms (Tsoi, 2018). Today, MSS in China only allow paid subscribers to download music files, which are encrypted by DRM technology and only available for listening within the premium subscription period. But piracy still exists. By simply using search engines, people can download music through various file-sharing websites, stream-ripping tools (i.e. converting the streaming music into audio files), or DRM crackers that can crack the encrypted music files (Testino, 2019).

Xiang (2016) states that many Chinese consumers lack the knowledge of copyright law and are not aware of the legal responsibility of their online behaviour due to the primary stage of the digital copyright legislation. Contradictorily, some researchers found the knowledge of law does not significantly influence piracy behaviour because individuals who pirate are not at a high risk of being prosecuted, and the media coverage on end consumer's piracy behaviour is rare (Al-Rafee & Cronan, 2006; Hsu & Shiue, 2008; Jambon & Smetana, 2012). In China, the cost and risk of digital music piracy are almost zero. Also, the copyright holders are generally unaware of being infringed, and the monetary and time costs of defending copyrights are high and not worth paying, owing to the ambiguous standards of judicial sentencing and the low level of litigation compensation (Yu, 2015; Liu, 2021).

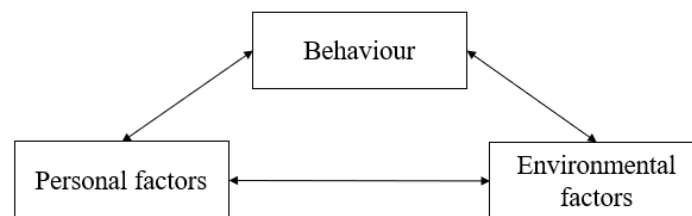
Nevertheless, the relationship between MSS purchase intention and piracy seems inconsistent in literature, including substitutes, complimentary to no relationship (Gopal, Bhattacharjee, & Sanders, 2006; LaRose & Kim, 2007; Borja & Dieringer, 2016). According to the global survey conducted by Poort et al. (2018) among nearly 35000 respondents, the displacement effect of piracy on MSS is not statistically significant. Bai and Waldfogel (2012) suggest that it is not necessarily the case that paid listening is replaced by piracy because consumers may simply use digital piracy to substitute physical piracy, especially when unpaid listening has a longer history in China. Hence, this paper needs to dive into Chinese consumers' intention for paid listening and investigate the role of attitude towards copyright plays in it.

2.2 Social Cognitive Theory

Bandura's (1986) Social Cognitive Theory (SCT) is one of the most influential behaviour theories focused on human observational behaviour learning. SCT states that the relationship between self and society is based on the mutual influence of external environmental factors, internal personal factors, and behaviour (Bandura, 1986). The figure of the original SCT model can be seen below.

Figure 1

The Original Model of Social Cognitive Theory (Bandura, 1986)



SCT is a theory with high flexibility and has been applied to various fields such as information science, copyright infringement, eco-friendly and health behaviour (Lin & Hsu, 2015; Sawitri et al., 2015; Lowry et al., 2017; Middleton et al., 2019). So far, however, there has been little discussion about using the SCT framework to investigate intentions for MSS subscriptions. In the area of piracy study, according to a meta-analysis among 257 digital piracy studies, SCT could best predict piracy behaviour and turned out to be the most comprehensive theoretical framework that has a good quality of fit for unifying the piracy literature and summarises almost all the relevant predictors (Lowry et al., 2017).

Digital piracy and MSS studies are in similar contexts as pirating and music streaming are both ways of listening to digital music and serve as alternative options to each other; thus, it is logical for this paper to adopt SCT as its theoretical underpinning to investigate elements affecting people to pay for MSS subscriptions. Based on SCT, the possible affecting factors for purchasing paid MSS can be divided into perceived value, personal elements and environmental elements, representing the cognitions, personal characteristics and beliefs, and

social and conditional influence. They will then be specified and introduced in the context of paid MSS subscriptions in this chapter.

2.2 Purchase intention

To investigate the attitudes and perceptions of Chinese consumers toward paid MSS, purchase intention (PI) is chosen as the dependent variable in this paper. The intention is considered the key predictor of actual behaviour (Montaño & Kasprzyk, 2015), and PI refers to the tendency of consumers to buy a certain product or service, which is a fundamental variable in the field of marketing research (Takaya, 2019; Peña-García et al., 2020). Zeithaml (1988) believes that having a positive PI means consumers have a favourable opinion of a certain product or service and reflects a higher possibility of purchase behaviour. Therefore, PI is defined in this paper as one's perceived probability and willingness to subscribe to paid MSS.

To identify the possible drivers and deterrents for PI in the MSS context, the Social Cognitive Theory and the Value-based Adoption Model are integrated as the theoretical basis of this study, based on which a research model is developed and presented as follows.

2.4 Perceived value

The most commonly used personal factor in the SCT framework is outcome expectancies, which accounts for the variance in the intention to music downloading in many SCT-related piracy studies (LaRose & Kim, 2007; Lowry et al., 2017). The construct of outcome expectancies refers to the believed consequences of one's behaviour and serves as the cognitive resources for self-directed human behaviour (Bandura, 2001; Fasbender, 2020). Similarly, the theoretical view of customer value suggests that a consumer's purchase decision can be understood through experience with expected values (Sheth et al., 1991). To better fit into the consumption context, this paper uses perceived value to explain the expected cost-benefit outcomes of paid MSS subscriptions.

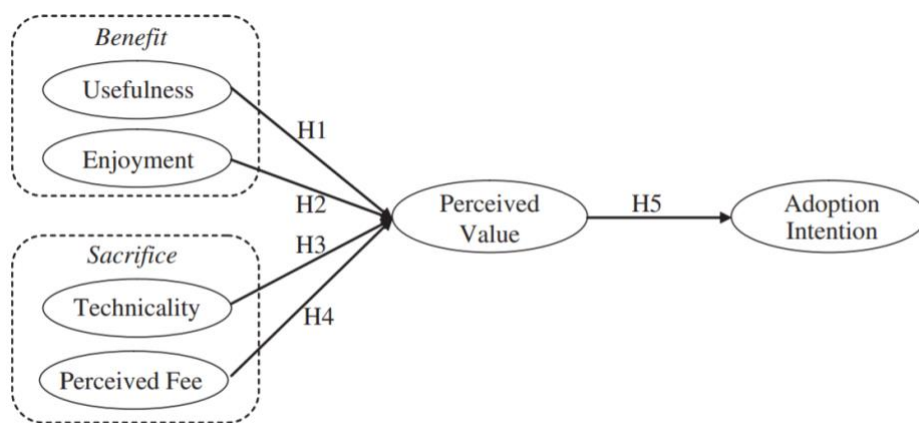
Perceived value explains consumers' overall assessment of the utility of a product or service, and it has proven to be a stable predictor of consumer behaviour and has been

extensively adopted by studies on information and online entertainment services (Pihlström & Brush, 2008; San, 2020). The notion of perceived value is subjective and situational (Zeithaml, 1988; Chang & Dibb, 2012) and is operationalised based on cost-benefit trade-off analysis (Lin et al., 2005). To construct the benefit and cost components of perceived value, the Value-based Adoption Model (VAM) (See Figure 2) is adopted in this paper.

The origin of the VAM model is the Technology Acceptance Model (TAM), which analyses user acceptance through perceived usefulness and perceived ease of use and is one of the most important models in the technology acceptance field (Davis, 1989). Many studies regard using paid MSS as a technology adoption behaviour and apply TAM to research the effect of technology acceptance factors on MSS adoption and consumption (Z. Wang, 2019; He et al., 2021). But being created to explain technology adoption in organizational environments, TAM lacks the ability to predict personal usages of technology (Kim et al., 2007). As Wang (2008) criticises, TAM only taps the perceived benefit aspects and does not take account of perceived cost components, lacking completeness in explaining the consumer decision-making process.

Figure 2

Value-based Adoption Model (Kim et al., 2007)



To better investigate customers' mobile internet adoption, Kim et al. (2007) revised TAM and developed the VAM model, which has been widely used in the area of MSS purchase

research (Wang et al., 2013; Guerra, 2015; Fernandes & Guerra, 2019; He et al., 2021). The VAM model explains the rational consumption decision-making process by proposing two variables for each benefit and cost construct (See Figure 2 above). In line with the VAM model, this paper proposes the benefit components as usefulness and enjoyment, and the cost components as perceived ease of use and perceived monetary cost, which are explained respectively in the following sections.

2.4.1 Usefulness

VAM regards *usefulness* as an individual's outcome expectancy of using a new technology, which is cognitive in nature and reflects the extrinsic motivation (Babin et al., 1994; Kim et al., 2007). The concept of usefulness is similar to product quality, which refers to the product's usefulness in serving the consumer's needs (Steenkamp, 1990). Many studies underline usefulness as a key predictor of information services adoption and purchase (Pedersen et al., 2002; Pongnatpanich & Visamitanan, 2016), so it is essential to look into how Chinese consumers perceive the usefulness of paid MSS. In this paper, usefulness is defined as the extent to which consumers expect that using paid MSS would fulfil the purposes they have for doing so. The higher usefulness is, the more likely that consumers perceive paid MSS as able to meet their needs.

Usefulness of paid MSS can be generated from music content provision and value-added services. Han (2019) claims internal product attributes such as content accessibility and quality to be the most important predictors of users' willingness to pay for digital music in China. As for content accessibility, the popular MSS in China (e.g. QQ Music) have more than 60 million licensed songs for on-demand streaming (Wang & Xie, 2021), which is impossible for other formats to compete with. Z. Wang (2019) found accessing the exclusive music library in paid MSS to be a driver that enhances Chinese users' perceived functional value, which positively impacts their PI. The study of Fernandes and Guerra (2019) also indicates that the wide variety of music increases perceived usefulness of paid MSS.

Concerning content quality, paid MSS in China offer lossless audio that enhances users' music appreciation experience. There have been conjoint analysis studies showing sound quality is a critical product attribute that influences consumers' utility and willingness to pay (Doerr et al., 2010; Weijters et al., 2014). Nevertheless, Kim (2017) calls attention to the increasing outdatedness of sound quality as an analytical attribute because thanks to the advances in audio compression technology, it is becoming difficult for users to distinguish the difference between regular and lossless audio, and many listeners reported that it primarily depends on the difference of hardware such as smartphones, laptops, and earphones (Sinclair & Tinson, 2017).

Other than music content provision, paid MSS also offer value-added services and advanced music experience ubiquitously diving into people's everyday life (Hagen, 2016). First, the user friendly interface and searching engine make on-demand listening more convenient than ever, which can be used both online and offline seamlessly via paid MSS (Han, 2019). Second, music recommendations and personalised radio functions fulfil the need for music discovery (Levy & Bosteels, 2010). Third, many MSS create in-app communities and social sharing functions, encouraging user-generated content and social connectivity (Mäntymäki et al., 2020).

Mäntymäki et al. (2020) imply that ubiquity and new content discovery predict the intention of retaining premium MSS subscriptions. Im and Jung (2016) also state that as MSS provide trendy information, they seem more appealing to fashion-conscious consumers. Pillai et al. (2021) conducted a field study in India and suggest that MSS facilitated individual creativity and community building, contributing to the system's usefulness. Overall, these arguments and empirical results indicate that usefulness positively predicts PI for paid MSS directly or through the variable of perceived value. Therefore, the following hypothesis is proposed:

H1. Usefulness positively predicts Chinese consumers' purchase intention for paid MSS.

2.4.2 Enjoyment

VAM views *enjoyment* as emotional rewards from the experience of using technology, such as the perceived pleasure and joy in addition to instrumental value and performance consequences (Kim et al., 2007). This notion is consistent with the definition of emotional value, which means the utility derived from affective states that a product generates and is an effective tool in forecasting the consumption inclination (Sweeney & Soutar, 2001). Van der Heijden (2004) reports that the positive effect of perceived enjoyment on the intention to use a pleasure-oriented information system is greater than a productivity-oriented system. Consequently, perceived enjoyment is essential to predict the behavioural intention towards MSS. In this paper, enjoyment is defined as the extent to which a consumer expects emotional value and hedonic satisfaction from using paid MSS.

The concept of enjoyment is often used to capture the hedonic value attributed to the use of online content services (Mäntymäki et al., 2020). Hedonic consumption is defined by Hirschman and Holbrook (1982) as the multisensory, fantasy and emotive aspects of product usage experience. These experience-oriented products often involve fun, amusement, fantasy, arousal, sensory stimulation, and enjoyment (Pucely et al., 1988). Research has suggested that enjoyment and hedonic motivations are important determinants of consumers' attitudes towards online and conventional shopping (Moon et al., 2017). In the field of music consumption, seeking pleasure and emotional stimulation are revealed as key motives of music listeners by Lacher (1989). Chen et al. (2018) distributed a survey among USA college students and reported that the intention for retaining MSS subscriptions is driven by expected hedonic performance. In China, H. Wang (2016) also suggested that emotional value was the most vital driver for digital music payment.

Furthermore, MSS in China typically formulate the premium benefits as “privileges” and create badges for users based on subscription type and VIP levels to let consumers enjoy the VIP status (QQ Music, 2021). San (2020) surveyed South Asian participants and indicates the emotional value is the most influencing factor for MSS purchase intention because limited functions of free version MSS can make users feel distracted and frustrated. Consequently,

paying for MSS can offer them a more relaxed and soothing experience. In line with the findings above, the following hypothesis is proposed:

H2. Enjoyment positively predicts Chinese consumers' purchase intention for paid MSS.

2.4.3 Perceived ease of use

In addition to money, consumers sacrifice other resources in their purchase behaviour, including time, energy and effort (Zeithaml, 1988). The costs of these resources are called non-monetary costs that diminish the value perception of a product or service (Wang et al., 2013). To represent non-monetary costs, this paper adopts the construct of *perceived ease of use*, which derives from the TAM model developed by Davis (1989). TAM claims that information technology is more likely to be accepted and adopted if it is deemed easy to use by users (Davis, 1989). In this paper, perceived ease of use refers to the extent to which a consumer perceives using paid MSS could be easier than without paying. In other words, an individual with higher perceived ease of use believes paying for subscriptions could make it easier to use MSS. The variables technicality and effort expectancy utilised in similar studies also describe the same meaning as perceived ease of use (Kim et al., 2007; Venkatesh et al., 2012).

In the MSS context, perceived ease of use involves elements of software skills, understanding premium offers, and efforts to purchase and use paid MSS. As Helkkula (2016) emphasises, effort expectancy has a strong link to user experience of MSS, which involves abundant interaction with the software system. Paid MSS in China typically offer around 20 items of benefits in the VIP tier, which requires time and learning effort to understand and use. Regarding the purchase process, users have to go through the cumbersome steps of app downloading, registering, logging in, purchasing, and paying for premium subscriptions, in which the payment step is recurring monthly (He et al., 2021). Also, the fragmentation of exclusive copyrights results in incomplete music libraries on digital music platforms in China. This means users need to use multiple MSS platforms to search and get access to full resources, which causes barriers for using paid MSS (Xiang, 2016; He et al., 2021).

Van der Heijden (2004) points out that perceived ease of use has a central role in hedonic-oriented information systems, a category that MSS fall into, and found it significantly influence users' adoption intention. As empirical evidence, numerous previous studies have identified perceived ease of use as a significant predictor for intention of subscribing to paid MSS (Chang et al., 2021; Barata & Coelho, 2021). In the online Q&A industry, Li et al. (2018) also reported that perceived non-monetary costs affect users' willingness to pay through the full mediating of perceived value. Contradictorily, some researchers rejected the importance of perceived ease of use due to the increased computer self-efficacy in the Internet age (Chu & Lu, 2007; Wang et al., 2013). Acknowledging people's improved IT skills, Xiang (2016) and He et al. (2021) focus on the perceived easiness of accessing music content but have inconsistent results. In all, the following hypothesis is proposed:

H3. Perceived ease of use positively predicts Chinese consumers' purchase intention for paid MSS.

2.4.3 Perceived monetary cost

Generally, consumers' perceived sacrifices are categorised into monetary and non-monetary costs. *Perceived monetary cost* refers to consumer's perception of financial payment for a certain product or service (Wang et al., 2013). Instead of always remembering perfect information about prices, customers use internal reference prices, that is, the price in their memories, as a basis for judging or comparing actual prices (Grewal et al., 1998). Therefore, previous studies usually measure perceived monetary cost by customers' perception of the objective payment (Monroe, 1973). The perception of price also varies from consumer to consumer depending on their circumstances (M. Wang, 2018). Similar to the work of Kim et al. (2007), perceived monetary cost is defined in this paper as the extent to which a customer believes that subscribing to paid MSS is expensive.

In the context of MSS, perceived monetary cost comes from the recurring payment for subscribing to paid MSS, which is described by Arditi (2018) as unending consumption. Premium users pay the periodic subscription fee and evaluate the price for money from the

first-hand experience accessing premium resources and functions. In contrast, free users can only analyse perceived monetary cost based on secondary sources of information about the value-added features, which leads to a higher degree of uncertainty and risk aversion (Mäntymäki et al., 2020).

Previous research shows that perceived monetary cost can influence PI directly or through the mediating role of perceived value (Li et al., 2018). For example, Chang and Wildt (1994) demonstrate that a trade-off between product quality and perceived price leads to perceived value, a primary factor influencing PI. The same results have also been found in the context of online video services (Sun, 2017; Sheng et al., 2021). Meanwhile, numerous previous works have shown that perceived monetary cost directly influences PI in the field of MSS and e-reading services (Guerra, 2015; Fernandes & Guerra, 2019; Z. Wang, 2019; Mäntymäki et al., 2020; Cheng et al., 2021). Accordingly, the following hypothesis is proposed:

H4. Perceived monetary cost negatively predicts Chinese consumers' purchase intention for paid MSS.

2.5 Personal elements

2.5.1 Music affinity

Music affinity refers to an individual's music fanship and the degree of importance one places on music (Kinnally et al., 2008). The term affinity was first used by uses and gratifications researchers to explain the relationship between television content attachment and media use motives (Conway & Rubin, 1991; Ferguson & Perse, 2000). As a music-related personal characteristic, it can be speculated that music affinity associates users' demand for listening to music, which further affects their PI for paid MSS.

The cross-country survey of Peitz and Waelbroeck (2004) indicated the different forms of entertainment activities that emerged in the internet era made music-centric activities less important than before, partly explaining the downward trend in CD sales. For example, short video services (e.g. Tiktok) increasingly occupy users' screen time (China Netcasting Services

Association, 2021). Fastdata's (2020) survey shows that for Chinese users whose music streaming time has dropped by 50%, over 70% of their entertainment app usage time is spent on short video services. Thus, music affinity is of interest here as music lovers may be more likely to use MSS when compared to other substitute online activities. Plus, concerned that most of the MSS in China provide paid music catalogues as a premium offer, listeners with higher music affinity may have a stronger intention to pay for premium subscriptions to get unlimited access to music instead of being satisfied with substitute songs.

Additionally, literature concerning music listening has suggested that music can enable listeners to construct and present their social identity (Ter Bogt et al., 2011). Many platforms build active in-app communities and design visible symbols showing premium types and levels, facilitating users' PI for premium MSS to be recognised as music enthusiasts by others. As for related empirical research, a college student survey indicates music affinity is positively associated with CD purchasing behaviour (Kinnally et al., 2008). Likewise, a survey of 2100 Canadian respondents shows that music interest is positively correlated with music purchase and download behaviour (Andersen & Frenz, 2010). In China, Xiang (2016) found that music affinity slightly influences the willingness to pay for digital music. The following hypothesis is then proposed:

H5. Music affinity positively predicts Chinese consumers' purchase intention for paid MSS.

2.5.2 Attitude towards copyright

Attitude towards copyright is relevant in this research because copyright legislation did not exist in China until 1990, and China's property rights industry has also long been plagued by piracy (Y. Wang, 2017; Pastukhov, 2019). Zhang (2015) states that the primary antecedent of low MSS subscriptions in China is the negative attitude towards online content payment, which has been found chiefly related to copyright awareness. In this paper, *attitude towards copyright* measures the extent to which a consumer recognises the legitimacy of music copyright law. If consumers have a supportive attitude towards copyright, they are more likely

to realise their ethical responsibility under their online behaviour and subscribe to paid MSS instead of pirating.

Myrthianos et al. (2016) categorise consumers' beliefs on property rights legislation into three groups: one believes copyright protecting regulations are legitimate and act accordingly; one agrees with the spirit of these legislations, but pirates music for economic reasons; and one believes that piracy behaviour is legitimate. People with optimistic beliefs in copyright tend to think they should compensate the work of content providers by paying for licensed products (Zhang & Deng, 2018). China's legal system belongs to civil law, which views copyrights as reflecting the personalities and spirits of copyright holders rather than economic property rights (Y. Wang, 2017). Thus, Chinese consumers may be more inclined to the last group and are less aware of the necessity of financially compensating copyright holders, which influences their perception of paid MSS subscriptions.

At the early development age of online music, piracy was considered an illegal and unethical behaviour that led to considerable losses in digital media industries (Wagner & Sanders, 2001; Ang et al., 2001; Xiang, 2016; Lowry et al., 2017). However, many empirical studies showed digital music piracy could hardly account for declines in CD sales (Peitz & Waelbroeck, 2004; Oberholzer-Gee & Strumpf, 2007; Andersen & Frenz, 2010). Consumers have also developed new ethics in the internet context, opposite to the ethics defined by traditional business sellers and perceive almost no guilt or negative consequences towards piracy (Freestone & Mitchell, 2004; Nuttall et al., 2011). As Ang et al. (2001) state, Chinese consumers may agree that music piracy is unfair to musicians, but it is not unethical to buy pirated copies.

Based on these results, researchers started to justify the co-existence of free and paid online music, and this paper thus focuses on the effect of attitude towards copyright on paid listening rather than looking into piracy behaviour. San (2020) claims that people prefer to buy products from ethical companies and perceive emotional value from such purchase behaviour. Also, many consumers are aware of the beneficial societal consequences of paying for MSS, such as

supporting musicians, music platforms, and music industry (Weijters et al., 2014). Hence, the following hypothesis is proposed:

H6. Attitude towards copyright positively predicts Chinese consumers' purchase intention for paid MSS.

2.5.3 Attitude towards MSS subscription

In this paper, *attitude towards MSS subscription* is defined as the extent to which a consumer makes a positive or negative assessment of subscription business model of MSS. According to Fishbein and Ajzen (1977), a favourable attitude towards certain behaviour results in a greater intention of conducting the behaviour. It can then be inferred that the consumer intention to purchase MSS will increase if their assessment of the subscription model is positive. Similar to the business model of renting books from a library, subscribing to MSS does not offer users any form of legal ownership. MSS are used through the digital format, which may not provide consumers with a sense of security and ownership as tangible products do (Sinclair, G., & Tinson, 2017).

Insecurity can result from the instability of MSS subscriptions due to the constant changes in the streaming market and the licensing agreements (Watkins, Denegri-Knott, & Molesworth, 2016; Hu, 2019). Besides, the cultural censorship of the Chinese government is also a threat to the accessibility of music catalogues (Zeijlemaker, 2019). Users sometimes find plenty of their music collections become unavailable, or a music platform suddenly goes bankrupt (Zhang & Pan, 2021). Managing playlists requires a lot of time and effort (Sinclar & Tinson, 2017), and the temporary access approach can be a barrier to such investment and long-term subscriptions.

As for consumers' preference for ownership and tangibility, according to Belk (1988), people tend to project their identities and extended self through possessions. However, with the development of the internet and the emphasis on de-materialization in today's digitalised world, Belk (2014) argues that people are converting from "You are what you own" to "You are what you can access". Legal ownership is no longer necessary to raise consumers' purchase

intention (Belk, 2014), which is also supported by the evidence of Spotify's success (Lozić et al., 2020). Moreover, Sinclair and Tinson (2017) claim that consumers can feel a sense of psychological ownership by building extended self in managing music content and sharing their identities on MSS. Based on these results, the following hypothesis is proposed:

H7. Attitude towards MSS subscription positively predicts Chinese consumers' purchase intention for paid MSS.

2.6 Environmental elements

2.6.1 Descriptive norms

SCT suggests people tend to learn new behaviours by observing others, and norms are commonly used to reflect the impact of the social environment in this behaviour forming process (Lowry et al., 2017). *Descriptive norms* refer to one's perception of the attitudes and behaviours of their close networks (Rivis & Sheeran, 2003). People can effectively perform an acceptable act by imitating most people's behaviour (Chang et al., 2021). In the context of MSS, such social influence may come from friends and relatives' actual MSS purchase behaviour, attitude towards paid MSS and sharing behaviour on social platforms (Z. Wang, 2019). However, the anonymity of the internet allows individuals to stay away from the social surveillance of people around them, thereby weakening the predictive effect of subjective norms (Xiang, 2016). Thus, this paper focuses on descriptive norms, defined as consumers' perceived attitudes of their close group of people towards paid MSS. Having positive descriptive norms means consumers receive positive feedback from their close networks on paid MSS and are more likely to purchase them.

Besides people in real life, social influence can also exist in the music commenting and social community provided by MSS in China. During repeated social communication and information exchanges, people's behaviour can easily be influenced by others in the same social group, as explained by social identification theory (Abrams, & Hogg, 1990). He et al. (2021) conclude that the influence of interpersonal relationships on willingness to pay for MSS is growing because of the development of social features on music platforms, and fan identity

can help users quickly integrate into a particular social group. Also, China is a highly collective-oriented country, and social norms are a relatively decisive factor for people with a collective cultural background (Hofstede Insights, 2021; Triandis, 1994).

There has been empirical research examining the effect of descriptive norms on PI for online content services in China. Aiming at the attitude and behaviour of people around, Xiang (2016) found that collective norms significantly impact Chinese listeners' willingness to pay for digital music. The same results are also shown in the paid online video field (Liang, 2017). Z. Wang (2019) incorporates media publicity and social media sharing into the operationalisation of social influence, which positively affects PI for digital music membership. He et al. (2021) also noticed the online social context and identified that the online word of mouth moderates the effect of perceived value on willingness to pay for MSS, as the common favourable comments can reduce users' perceived insecurity of virtual products. Therefore, the following hypothesis is proposed:

H8. Descriptive norms positively predict Chinese consumers' purchase intention for paid MSS.

2.6.2 Habit of unpaid listening

Habit refers to the propensity to complete a certain behaviour spontaneously without making a conscious decision on it, resulting from past experience (Limayem et al., 2004). Based on habit theory, one learns from experience and develops a habit because of positive reinforcement from previous experiences (Yoon, 2011). LaRose and Eastin (2004) integrated the theory of media attendance into the SCT framework to explain Internet uses and gratifications, finding that habitual behaviour and deficient self-regulation as new determinants of media behaviour. As a piece of evidence, Kwong et al. (2003) found that people with experience buying pirated CDs are more likely to buy pirated copies again. In the MSS context, *habit of unpaid listening* represents the extent to which individuals insist on listening to music for free.

Habit of unpaid listening is particularly relevant in the context of MSS in China. In the early years of online music, Chinese music platforms offered free music streaming and downloading services to expand their user base (He et al., 2021). As Helkkula (2016) claims, the downside of the freemium model is that it may be less effective to acquire clients because there is a risk that a consumer may become a habitual user of the free service version. Furthermore, MSS in China today provides core on-demand streaming functions without advertisement interruptions in the free tier. SCT suggests that when considering whether or not to imitate an observed behaviour, individuals have certain outcome expectations shaped by vicarious observation and experience (Bandura, 1986). Thus, the positive experience of free online music use may inhibit the Chinese consumers' PI for MSS.

From a mental perspective, many Chinese consumers have also cultivated a free mentality towards MSS through habitual behaviour. In Zhang's (2015) survey among Chinese consumers on digital music purchase, 74% of the respondents have never paid for streaming music, and 88% of them believe (online) music should be free. Lin et al. (2013) illustrate the direct and negative impact of free mentality on attitude towards paying for MSS results from increased perceived sacrifice. Consumers accustomed to unpaid listening may perceive a certain degree of unfairness when asked to pay for the content (Wang et al., 2005; Aguiar, 2017). The survey among Chinese respondents of Xiang (2016) indicates that consumers' habit intensity of illegal downloading can affect their attitude towards the willingness to pay for digital music. Having been long accessing music online for free, Chinese users may stick to their free mentality and behaviour even when they have realised the irrationality of this habit (Xiang, 2016). Consequently, the following hypothesis is proposed:

H9. A habit of unpaid listening negatively predicts Chinese consumers' purchase intention for paid MSS.

2.7 Demographic control variables

The influence of demographic variables on PI for paid MSS has been shown in previous research. Therefore, this study includes age, education level, and income level as control

variables in the research model to enhance the internal validity and help establish the effect of each factor.

Firstly, age is a common demographic indicator, but its impact on PI lacks consistency in purchasing online content. The empirical study of Yang et al. (2015) in the US showed that age was negatively related to willingness to pay for online content, mainly due to young people having a higher dependency on new media, although they have relatively low disposable income. However, in the survey performed by Fernandes and Guerra (2019), the young user group (between 15 and 25 years old) exhibited a lower PI of MSS. The researchers concluded that young users are more likely to practice music piracy, get used to the advertising-based model, and have a reference price for online content at zero (Weitjers et al., 2014; Punj, 2015). Conversely, older people may have different reference prices (Papies et al., 2011), and they usually feel less comfortable dealing with new technologies (Kumar and Lim, 2008).

Secondly, educational level is also a widely examined characteristic, and it may relate to income level, perceived ease of use, and attitude towards copyright in this study. He et al. (2021) included educational level as a control variable, showing a significant positive impact on willingness to pay for online music in the Chinese market. In Xiang's (2016) survey conducted in China, educational level was shown to be negatively related to willingness to pay for MSS, which could be that people at a higher educational level have more options for entertainment activities. Moreover, well-educated people may believe copyright could be protected through other means besides financial payment or have more radical arguments that refuse to accept copyright per se, thus leading to a less purchase intention for paid MSS.

Thirdly, income level is an essential demographic variable to pay attention to in a purchase intention study. Looking at the consumption structure (National Bureau of Statistics of China, 2022), the higher income the consumers have, the more money is spent on cultural and entertainment consumption. Income level may also be associated with education level and social image management, so consumers may be willing to pay for licensed music to manifest their moral and legal awareness (Xiang, 2016). Madden and Lenhart (2003) empirically

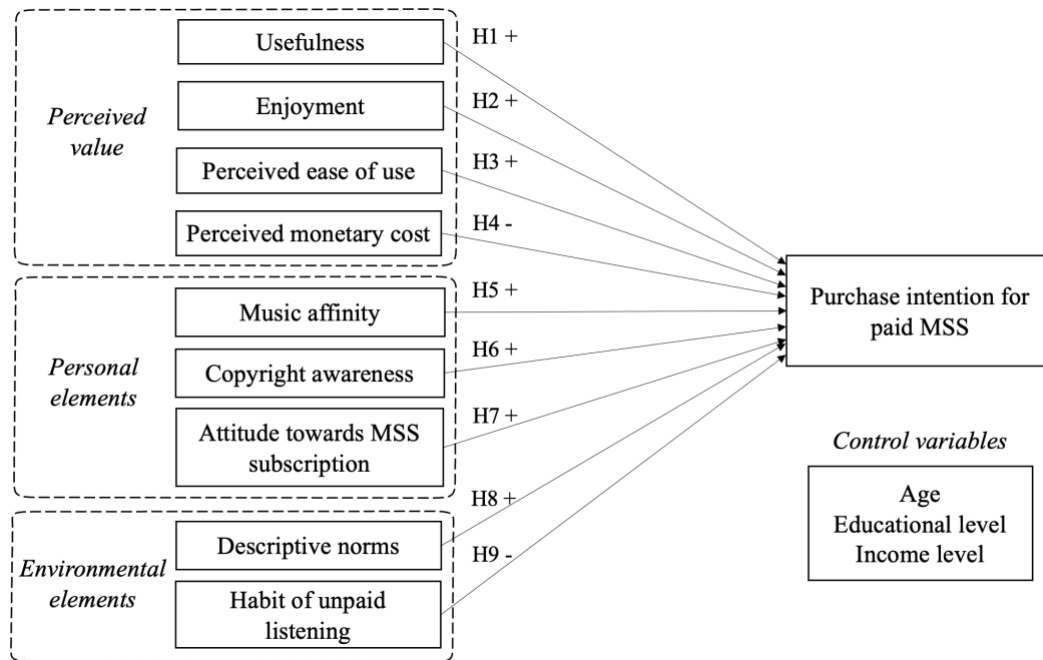
demonstrated that users with a lower household income tend to pirate music. After including the three control variables, the proposed research model is completed and explained below.

2.8 Research model

Based on the previous literature review and arguments, a research model integrating SCT and VAM on the drivers and inhibitors of PI for paid MSS in China is developed, in which perceived value, personal elements, and environmental elements are three categories of the factors. Perceived value consists of the variables of usefulness, enjoyment, perceived ease of use and perceived monetary cost. Personal elements include attitude towards copyright, music affinity, and attitude towards MSS subscription. Environmental elements are formed of descriptive norms and habit of unpaid listening. To account for the potential impact of the demographic variables, the gender, age, educational level, and income level of the respondents are included as control variables. The research model is shown in the figure below, followed by the proposed hypotheses.

Figure 3

The Research Model of Drivers and Inhibitors for MSS Purchase Intention



H1. Usefulness positively predicts Chinese consumers' purchase intention for paid MSS.

- H2. Enjoyment positively predicts Chinese consumers' purchase intention for paid MSS.
- H3. Perceived ease of use positively predicts Chinese consumers' purchase intention for paid MSS.
- H4. Perceived monetary cost negatively predicts Chinese consumers' purchase intention for paid MSS.
- H5. Music affinity positively predicts Chinese consumers' purchase intention for paid MSS.
- H6. Attitude towards copyright positively predicts Chinese consumers' purchase intention for paid MSS.
- H7. Attitude towards MSS subscription positively predicts Chinese consumers' purchase intention for paid MSS.
- H8. Descriptive norms positively predict Chinese consumers' purchase intention for paid MSS.
- H9. A habit of unpaid listening negatively predicts Chinese consumers' purchase intention for paid MSS.

3 Methodology

3.1 Design

Considering the unique circumstances in the Chinese music streaming market and that SCT and VAM models are developed in a different context than MSS in China, this paper adopts a cross-sectional survey approach to explore and advance correlational inferences. The questionnaire method has the advantages of rapid dissemination, reduced costs and high response rates (McDaniel & Gates, 2013), thus it is suitable for a study targeting a societal base. Furthermore, following Cyr's (2019) point, a focus group session was conducted as the pre-test to explore relevant scales in the MSS context and inform the survey questionnaire for more valid measures. After receiving ethical approval from the Ethics Committee of BMS faculty at the University of Twente, the questionnaire was launched online and active for one week on the Qualtrics platform.

3.2 Participants

To investigate Chinese consumers' perception and intention of paying for paid MSS at a societal level, the research population of this paper is Chinese MSS users, involving both free users and paid users, aiming to explore the consumer group at a societal level. Although non-probabilistic sampling has limitations in representing the general population (Maroco, 2007), a convenience sampling approach is chosen to collect data as it is an efficient way to gather a great variety of respondents. The questionnaire was distributed via various social networks, such as Weibo, WeChat and Mastodon, to get as significant variation as possible. A small reward (approximately 5 CNY per person) was distributed for survey promotion.

Table 2
Descriptive Statistics of Research Sample

<i>Age</i>		M = 26.5 / SD = 5.6	
		<i>N</i>	<i>Percentage</i>
<i>Region</i>	Mainland China	409	88.7%
	Hong Kong, Macao, and Taiwan	7	1.5%
	Other region	45	9.8%
<i>Educational level</i>	Secondary school and below	4	9.0%
	High school	28	6.1%
	Bachelor's	300	65.1%
	Master's and above	127	27.5%
<i>Income level</i>	Below 2000 CNY	124	26.9%
	2000-5000 CNY	82	17.8%
	5000-10000 CNY	106	23.0%
	10000 CNY and above	146	31.7%
<i>User type</i>	Chinese	321	69.6%
	Dual	90	19.5%
	Global	50	10.8%

The online questionnaire yielded 607 responses, of which 461 are valid after removing incomplete and improperly filled data. The descriptive sample characteristics and groupings are listed above in Table 2. The ages of participants ranged from 17 to 51 years, with an average age of 26.5 years and a standard deviation of 5.6. Most respondents live in mainland China (88.7%) and have received higher education (Bachelor's, 65.1%; Master's and above, 27.5%).

The distribution of participants' income levels is relatively even, and the two largest groups are respectively the highest (10000 CNY and above, 31.7%) and lowest (Below 2000 CNY, 26.9%) income groups. Moreover, of the final sample, 321 are Chinese MSS users, 50 are global MSS users, and 90 are dual users who use both Chinese and global MSS. The distribution of participants' demographics is fairly consistent with the Chinese MSS consumer profile reported by Netherlands Enterprise Agency (2021), except for the poor representation of the population with lower educational levels, which is likely the result of the convenience sampling method that utilised the researcher's social network.

3.3 Procedure

On the first page of the questionnaire, the respondents were informed of the purpose of this research and the researcher's contact, guaranteed anonymity and confidentiality of the data, and requested their participation permission. After receiving the consent, the questionnaire started collecting the demographic data (i.e. region, age, educational level, income level) to identify Chinese consumers and the potential influence of control variables. Afterwards, the respondents were informed of the definition of paid MSS and were asked the exact MSS they currently use. The participants who do not use MSS were directed to the end of the survey.

Thereafter, the construct measurement items were displayed to the respondents. The first block included purchase intention, attitude towards MSS subscription, and descriptive norms. The second block showed the items for perceived value (i.e. usefulness, enjoyment, perceived ease of use, and perceived monetary cost). The questions about music affinity, habit of unpaid listening, and attitude towards copyright were placed in the third block. At the end of the questionnaire, the confirmation page showed the message of survey completion and the researcher's contact for further information.

3.4 Analysis

The collected dataset was first cleaned by removing missing data and outliers, and the factor analysis and Cronbach's Alpha analysis were employed to examine the validity and reliability of the survey measurements. Then, the main hypotheses were tested through

hierarchical regression analysis. Last, additional analyses regarding the impact of user type and the interaction effect between variables were conducted, including One-way ANOVA, regression, and simple mediation analyses. This study operated data analyses on the software IBM SPSS Statistics version 28, and the mediation analysis adopted the bootstrapping technique using the extension PROCESS macro version 4.1.

3.5 Pre-test

To enhance the contextual relevance of the questionnaire, a focus group session was conducted as the pre-test of this study to get insights from how Chinese consumers verbalise their perceptions of paid MSS. There were nine participants aged 20 to 45 recruited from a Chinese music community, and they all have experience purchasing paid MSS. The focus group was held via online conference meeting for one and a half hours, discussing topics of motivations for purchasing MSS, attitude towards piracy and subscription model, and social influence.

In this pre-test, music accessibility and convenience were acknowledged as the core values of paid MSS, which matches the usefulness factor in the research model. Interestingly, one male participant claimed that for music lovers, the specific song, artist or genre of the music being played is important, while many people play music to merely set the mood or even listen to anything, for which music could be easily replaced by a podcast or video. All participants identified themselves as music lovers, which explains their paying for unlimited music access instead of switching to other songs or activities. Moreover, several participants are CD and vinyl listeners who turned to MSS because of its convenience. Therefore, the irreplaceability of music and the convenience of services can be used as items for measuring music affinity and usefulness.

Regarding the inhibitors of paying for MSS, most participants agreed that the uncertainty of the service stability makes them feel reluctant. Three participants wanted to avoid the risk of losing music collection due to copyright issues, and two participants subscribed to a platform yearly only for retaining their playlists that were created years ago. Additionally, all

participants were experienced at pirating music and perceived no risk of pirating music unless the music content is politically sensitive. Most of them did not feel guilty about piracy behaviour. One male participant even felt proud of pirating as a way to confront totalitarian power because the music he pirated was often banned by censorship. Therefore, scales of uncertainty towards MSS and ethical perception of piracy were added to the operationalisation of attitude towards MSS subscription and copyright.

3.6 Measurement

The questionnaire items were measured on a seven-point Likert scale anchored from strongly disagree (1) to strongly agree (7). To operationalise the constructs and variables, the questionnaire items were mainly adapted from prior studies to ensure measurement validity, and some of the scales were originally designed based on literature review and the pre-test results. Moreover, previous research on the international survey has established that it is best to choose the questionnaire language based on the respondents' language proficiencies (Harzing, Reiche & Pudelko, 2012), so the questionnaire was written in Chinese. In total, the survey instrument used in the measurement consists of 55 questions, divided into five sections, and translated into English as shown in Table 3 below.

Perceived value

Concerning perceived value, six items for *usefulness* and six items for *perceived ease of use* were adapted from Davis (1989) and expanded respectively with some scales from Fernandes and Guerra (2019), Van der Heijden (2004) and pre-test results to better fit the MSS context. Another six items for *enjoyment* and five items for *perceived monetary cost* were mainly based on Kim et al. (2007), partly referenced Helkkula (2016) and He et al. (2021), and partially self-developed based on the literature review to adapt to the context in China.

Personal elements

As for personal elements, five items for *music affinity* were adapted from Kinnally et al. (2008) and Xiang (2016) but removed the scale concerning downloading and purchase behaviour. *Attitude towards copyright* were measured through five items, in which four items

were based on Z. Wang (2019) and Xiang (2016), and one scale of moral judgment on piracy was formulated from the pre-test results. Five items for *attitude towards MSS subscription* were adapted from Chen et al. (2018) and Chang et al. (2021), and a scale of uncertainty was originally developed to better suit the MSS subscription context.

Environmental elements

Last, five items for descriptive norms were benefitted from the investigation of Xiang (2016), Chang et al. (2021), and Z. Wang (2019). Six items formed of *habit of unpaid listening*, in which four items were adapted from Limayem et al. (2004) and Xiang (2016), and two self-developed scales were utilised to look into actual piracy behaviour. Finally, four items for *purchase intention* were resulted from Chu and Lu (2007), and an original scale was added to investigate the purchase intention for subscribing to multiple platforms.

3.7 Validity and reliability

To verify the validity of the constructs, this study implemented a confirmatory factor analysis with varimax rotation, extracting fixed ten factors according to the research model. Well above the recommended benchmark of .6 (Kaiser, 1974), the Kaiser-Meyer-Olkin (KMO) value of the collected data was examined as .926, meaning the sample was excellently adequate. Plus, Bartlett's test of Sphericity reached statistical significance ($p < .001$), indicating the data were suitable for factor analysis.

According to Hair (2009), the factor loading values above 0.4 are considered acceptable. As a result, eight items with low rotated factor loadings were removed from the 55 original items (see Table 3), including statements of usefulness, attitude towards copyright, attitude towards MSS subscription, descriptive norms, and habit of unpaid listening. The result also showed that PI and attitude towards MSS subscription measured the same component. Consequently, they were merged as one factor: purchase intention, which now consists of 10 items after removing the item "I worry that even if I have purchased paid MSS, the music I want to listen to may still be taken down".

Among the remaining items, reliability analyses were conducted using Cronbach's Alpha to ensure consistency within each construct. A scale can be clarified as satisfactorily reliable if the Cronbach's Alpha value is close to or higher than 0.70 (Taber, 2018). The first descriptive norm statement was excluded to increase Cronbach's Alpha from 0.48 to 0.56. Although this reliability level was below the acceptable level, the remained two items of descriptive norms were still used for the purpose of this study and the results must be interpreted with caution. The other eight constructs' alpha values vary from 0.93 to 0.69, mostly above 0.8, showing sufficient consistency and good reliability of the measurements. In the end, a total of 46 items were used, and the overview of the construct measurement statements, rotated component matrix, explained variance, eigenvalue, and Cronbach's alpha were demonstrated in the table below.

Table 3
Survey Measurements and Results of Factor and Reliability Analyses

Construct	Statement	Factor									
		1	2	3	4	5	6	7	8	9	10
Usefulness	1 Using paid MSS helps me to access music content more easily					.69					
	2 Using paid MSS can improve my music experience					.73					
	3 Using paid MSS allows me to listen to music with better audio quality and sound effects					.67					
	4 Paid MSS are convenient		.48			.62					
	5 Using paid MSS can enhance my effectiveness in listening to music					.61					
	6 Overall, I find paid MSS not useful (reversed) *	.44									
Enjoyment	1 I have fun interacting with MSS		.58	.47							
	2 Using paid MSS can provide a lot of enjoyment		.73								
	3 I enjoy the VIP status on MSS		.76								
	4 Using paid MSS is very entertaining		.76								
	5 Using paid MSS bores me (reversed)		.67								
	6 I enjoy using paid MSS		.69								
Perceived ease of use	1 It is easy for me to learn to use paid MSS			.63							
	2 My interaction with MSS is clear and understandable			.80							
	3 I would find it easy to get MSS to do what I want them to do			.76							
	4 Paid MSS can be accessed fast and instantly		.41	.61							
	5 Interaction with MSS does not require a lot of mental effort			.77							
	6 In general, I find paid MSS are not easy to use (reversed)			.68							
Perceived monetary cost	1 I think the price to pay for paid MSS is too high					.83					
	2 The price to pay for paid MSS is not reasonable					.76					
	3 The high price of paid MSS is a barrier of my purchase					.74					
	4 Recurring payments for MSS subscriptions are not acceptable for me	-.46				.59					
	5 I am pleased with the price I have to pay for the use of paid MSS (reversed)	-.41				.54					
Music affinity	1 Although I have other entertaining activities, listening to music is very important to me				.84						
	2 Listening to music every day is a part of my life				.88						
	3 I constantly explore new music				.79						
	4 I would rather listen to music than do anything else				.77						
	5 I could easily do without listening to music (reversed)				.66						

Table 3 (continued)

Table 5 (continued)												
Attitude towards copyright	1	The copyright of digital music should be protected										.71
	2	Online music charging is the result of compliance with copyright protection law										.68
	3	Music piracy is unethical										.81
	4	Online music should be free (reversed)*										-.66
	5	To my opinion, digital music consumption is beneficial to the development of the music industry										.61
Descriptive norms	1	Many people who are close to me do not use paid MSS (reversed) *									.41	-.53
	2	Many people who are close to me have good experiences using paid MSS *										
	3	Many people who are close to me support implementing online music charging									.65	
	4	Many people who are close to me have subscribed to multiple paid MSS									.75	
	5	Friends' sharing on social platforms would prompt my intention to subscribe to paid MSS *										
Habit of unpaid listening	1	I only listen to music if it is free.	-.53								.47	
	2	I have been enjoying music online for free for a long time *	-.54									
	3	It is hard for me to change from free listening to paid listening	-.55								.47	
	4	If asked to pay for access to music, I would search for free resources *	-.68									
	5	The number of songs I pirated is low (reversed) *									-.48	
	6	Without paid subscriptions, I am satisfied with the experience of using MSS for free									.56	
Purchase intention	1	The likelihood that I would pay for paid MSS is high	.87									
	2	I would consider using paid MSS	.78									
	3	My willingness to purchase paid MSS is low (reversed)	.78									
	4	I am willing to subscribe to multiple paid MSS if needed	.56									
	5	I predict I would subscribe to paid MSS in the near future	.71									
	6	Subscribing to paid MSS is a good idea	.61									
	7	It is necessary for me to subscribe to paid MSS	.78									
	8	It is wise to subscribe to paid MSS	.60									
	9	It is worthwhile to subscribe to paid MSS	.64									
	10	I worry that even if I have purchased paid MSS, the music I want to listen to may still be taken down (reversed) *										-.65
	11	Overall, my attitude towards subscribing to paid MSS is favourable	.65									
Explained variance:			27.95%	9.76%	5.04%	4.31%	4.11%	3.54%	2.85%	2.78%	2.24%	2.18%
Eigenvalue:			15.38	5.37	2.77	2.37	2.26	1.95	1.57	1.53	1.23	1.20
Cronbach's alpha:			0.93	0.88	0.86	0.86	0.85	0.82	0.76	0.69	0.56 ^a	

a. The Cronbach's alpha of descriptive norms is the value after removing the first item in the reliability test.

* Items that were not included in their respective scale.

4 Results

4.1 Scale descriptives

Table 4 below displays the descriptive statistical results (sample size, mean score, standard deviation) of the measurement scales, showing general perceptions of the participants towards the research constructs. A lower standard deviation indicates data are clustered around the mean. A lower mean score represents a higher degree of each scale as a Likert scale anchored from strongly disagree (1) to strongly agree (7) was used in this study. The mean score of PI ($M = 4.74$, $SD = 1.38$) was slightly higher than the neutral value, meaning the participants ($N = 461$) had a moderately positive PI for paid MSS. Among the eight independent variables, attitude towards copyright had the highest mean score ($M = 5.72$, $SD = 1.02$), indicating a quite favourable attitude of the participants ($N = 409$). Habit of unpaid listening had the lowest mean score ($M = 3.23$, $SD = 1.31$), which implied the respondents ($N = 409$) had a relatively weak degree of free listening habit.

Table 4

Descriptive Statistics of the Research Scales

Measurement scales	<i>N</i>	<i>Mean</i>	<i>SD</i>
Purchase intention	461	4.74	1.38
Usefulness	427	5.13	1.18
Enjoyment	426	4.45	1.17
Perceived ease of use	427	5.14	1.04
Perceived monetary cost	423	4.42	1.12
Music affinity	409	5.62	1.17
Attitude towards copyright	409	5.72	1.02
Descriptive norms	460	3.89	1.25
Habit of unpaid listening	409	3.23	1.31

Note. All of the scales were measured on a seven-point Likert scale from strongly disagree (1) to strongly agree (7).

4.2 Main results

Before testing the model, it is vital to check for multicollinearity to ensure there is no high correlation between independent variables. Thus, the values of variance inflation factors (VIF)

were calculated for each predictor. It is generally considered detrimental when two or more predictors have a VIF value higher than 5 (Daoud, 2017). The VIF values for predictors in this study were in the range between 1.0 and 2.3, which suggested that the multicollinearity of this regression model was within the acceptable range.

In order to evaluate the prediction of PI for paid MSS from the eight factors with controlling demographic variables, the hypotheses were tested through hierarchical linear regression analysis (see Table 5 below). From a practical perspective, demographic data is easier to acquire, so it is more of value to observe how the model's explanatory power changes after including the independent variables. Consequently, the three control variables of age, educational level, and income level were analysed in the first block. According to Cohen (1988), regression coefficients between 0.1 and 0.3, 0.3 and 0.5, and 0.5 and above indicate a small, medium, and large effect. The first step regression analysis resulted in a statistically significant model [$F(3, 395) = 5.41$, $adjusted R^2 = .03$, $p = .001$], in which age was a weak, negative predictor ($\beta = -.11$, $p < .05$) and income level was a weak, positive predictor ($\beta = .23$, $p < .001$) of PI for paid MSS.

Table 5

Results of Hierarchical Regression Analysis

Step and predictor		1	2	3
1.	Age	-.11*	-.07	.02
	Educational level	.01	-.01	-.01
	Income level	.23***	.12**	.08*
2.	Usefulness		.32***	.22***
	Enjoyment		.12**	.19***
	Perceived ease of use		.10**	.05
	Perceived monetary cost		-.36***	-.16***
3.	Music affinity			.10**
	Attitude towards copyright			.09**
	Descriptive norms			.09**
	Habit of unpaid listening			-.39***
F change:		5.41	78.93	50.63
adjusted R ² :		.03	.46	.64
Δ adjusted R ² :		.03	.43	.18

Note. The displayed coefficients are standardized coefficients beta at each step.

* $p < .05$. ** $p < .01$. *** $p < .001$.

In the second block, four perceived value variables were included because the VAM model is a known essential theory in this area (Fernandes & Guerra, 2019; He et al., 2021), and it is interesting to analyse its applicability in the Chinese context. The result of step 2 showed that the *adjusted R*² value increased from .03 to .46 [*F change* (4, 391) = 78.93, *p* < .001]. In this model, usefulness ($\beta = .32, p < .001$) was a moderate, positive predictor, income level ($\beta = .12, p = .006$), enjoyment ($\beta = .12, p = .027$), and perceived ease of use ($\beta = .10, p = .034$) were weak, positive predictors, and perceived monetary cost ($\beta = -.36, p < .001$) was a moderate, negative predictors on PI for paid MSS. Meanwhile, the predictive effect of age on PI became insignificant.

Last, other independent variables from SCT were added in the third block. The final model [*F change* (4, 387) = 50.63, *p* < .001] could explain 64.1% of the variance in purchase intention for paid MSS after incorporating music affinity, attitude towards copyright, descriptive norms, and habit of unpaid listening. Concluding from the regression analysis, the results of hypotheses testing showed that the final model supports most of the direct effect hypotheses. Among all of the independent variables, habit of unpaid listening ($\beta = -.39, p < .001$) was the strongest negative predictive effect on PI, which means people who get more used to free music listening tend to pay for MSS subscriptions less. Perceived monetary cost ($\beta = -.16, p < .001$) was the second powerful negative predictor of PI. In the final model, usefulness ($\beta = .22, p < .001$), enjoyment ($\beta = .19, p < .001$), and music affinity ($\beta = .10, p = .003$) are three weak, positive predictors of PI. Moreover, attitude towards copyright ($\beta = .09, p = .009$), and descriptive norms ($\beta = -.08, p = .006$) have statistically significant influence on PI. Accordingly, hypothesis 1, 2, 4, 5, 6, 8 and 9 are supported.

On the other side, hypothesis 3 is rejected because perceived ease of use ($\beta = .05, p = .217$) does not significantly affect PI. As the factor of attitude towards MSS subscription was merged with purchase intention, Hypothesis 7 was not tested here. Note that income level ($\beta = .05, p = .040$) was shown a slight significance in negatively influencing PI. The outcome of hypothesis testing is displayed below in Table 6.

Table 6*Summary of Hypotheses Testing Results*

Hypotheses	Outcome
H1. Usefulness positively predicts Chinese consumers' purchase intention for paid MSS.	Supported
H2. Enjoyment positively predicts Chinese consumers' purchase intention for paid MSS.	Supported
H3. Perceived ease of use positively predicts Chinese consumers' purchase intention for paid MSS.	Rejected
H4. Perceived monetary cost negatively predicts Chinese consumers' purchase intention for paid MSS.	Supported
H5. Music affinity positively predicts Chinese consumers' purchase intention for paid MSS.	Supported
H6. Attitude towards copyright positively predicts Chinese consumers' purchase intention for paid MSS.	Supported
H7. Attitude towards MSS subscription positively predicts Chinese consumers' purchase intention for paid MSS. ^a	Not tested
H8. Descriptive norms positively predict Chinese consumers' purchase intention for paid MSS.	Supported
H9. A habit of unpaid listening negatively predicts Chinese consumers' purchase intention for paid MSS.	Supported

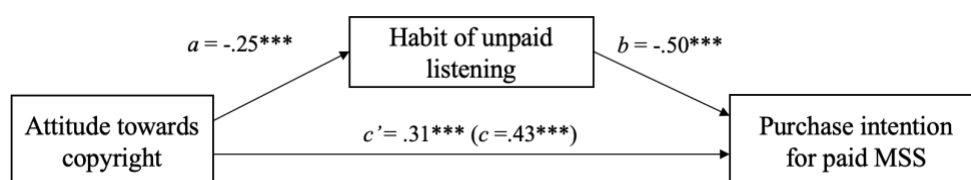
a. H7 was not tested as attitude towards MSS subscription was merged with purchase intention in the factor analysis.

4.3 Mediation effects

To further explore the relationships among variables, a series of mediation analyses were conducted using PROCESS macro and bootstrapping method (5000 sample size). In addition to the mediation models reported below, other mediation analyses were performed but are not reported here.

Figure 4

Simple Mediation Model for Attitude Towards Copyright on PI for Paid MSS Through Habit of Unpaid Listening (Standardised Coefficients)

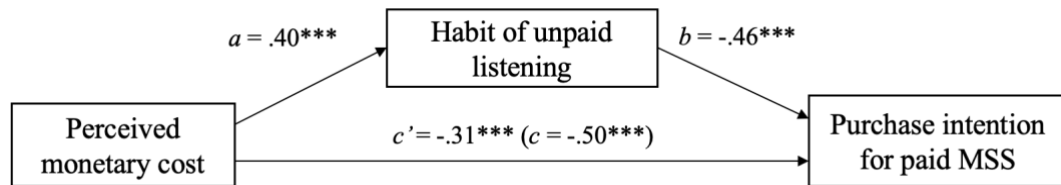


Because piracy behaviour may help explain the relationship between attitude towards copyright and PI for paid MSS, the first analysis examined the moderating role of habit of unpaid listening between the two variables (see Figure 4 above). The results revealed a partial mediation model, as both direct and indirect effects were significant and pointed in the same direction [Direct effect = .41, $p < .001$; Standardised indirect effect = 0.12, 95% *CI* (.08, .17)], and the indirect effect accounted for 21.5% of the total effect. This means attitude towards copyright was negatively related to habit of unpaid listening, which in turn was negatively

related to purchase intention. Taking habit of unpaid listening into account, there is still a weak, positive relationship between attitude towards copyright and PI for paid MSS.

Figure 5

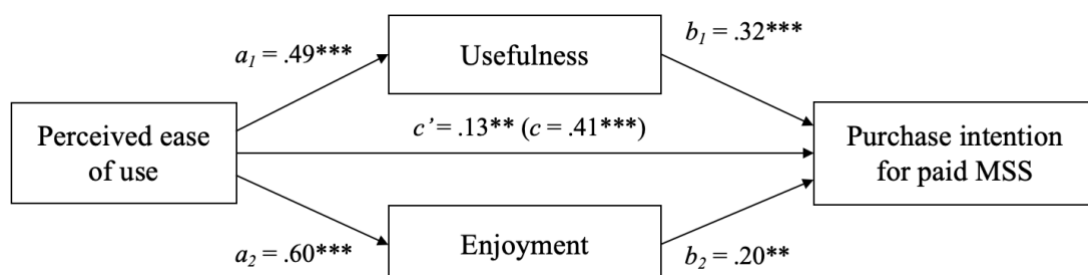
Simple Mediation Model for Perceived Monetary Cost on PI for Paid MSS Through Habit of Unpaid Listening (Standardised Coefficients)



The second analysis was performed to analyse whether habit of unpaid listening mediates the effect of perceived monetary cost on PI (see Figure 5 above), as using free music resources may influence the perceived price of paid MSS and lead to change in PI. Similarly, a partial mediation effect was found, in which perceived monetary cost was positively associated with PI both directly and indirectly through the mediator habit of unpaid listening [Direct effect = $-.39$, $p < .001$; Standardised indirect effect = $-.18$, 95% CI $(-.23, -.14)$], and the indirect effect was calculated to account for 29.5% of the total effect. That is to say, perceived monetary cost was positively associated with habit of unpaid listening, which in turn was negatively associated with purchase intention. Taking habit of unpaid listening into account, there is still a weak, negative relationship between perceived monetary cost and PI for paid MSS.

Figure 6

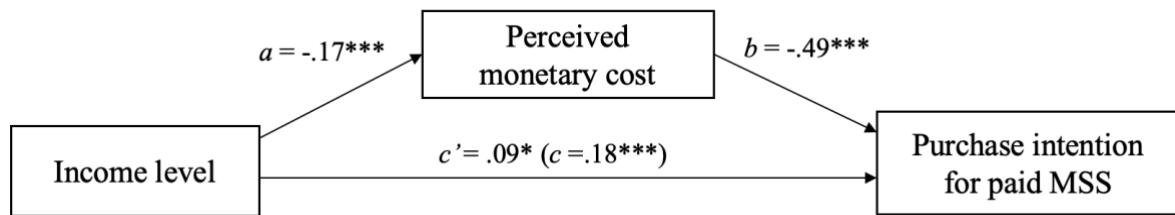
Parallel Mediation Model for Perceived Ease of Use on PI for Paid MSS Through Usefulness and Enjoyment (Standardised Coefficients)



Aiming to investigate the role of perceived ease of use in the research model, a parallel mediation analysis was conducted, in which perceived ease of use was the predictor, usefulness and enjoyment were the mediators, and PI was the outcome variable (see Figure 6). As a result, the total standardized indirect effect of perceived ease of use on PI was highly significant [Effect = .28, 95% *CI* (.20, .48)], accounting for 50.9% of the total effect. Moreover, the indirect paths through usefulness [Effect = .16, 95% *CI* (.10, .22)], and enjoyment [Effect = .12, 95% *CI* (.05, .19)] were both significant and led to a parallel mediation effect. Nevertheless, after including usefulness and enjoyment, perceived ease of use still has a weak and positive association with PI ($\beta = .13, p = .011$).

Figure 7

Simple Mediation Model for Income Level on PI for Paid MSS Through Monetary Cost (Standardised Coefficients)



Finally, a simple mediation analysis was performed to examine the impact of income level on PI for paid MSS as mediated by perceived monetary cost (see Figure 7) because people's perception of price may be influenced by the amount of money they earn. This turned out to be a partial mediation model, as both direct and indirect effects were significant and pointed in the same direction [Direct effect = .11, $p = .032$; Standardised indirect effect = .08, 95% *CI* (.04, .13)], and the indirect effect accounted for 40.5% of the total effect. In other words, income level was negatively related to perceived monetary cost, which in turn was negatively related to PI. After accounting for perceived monetary cost, there is still a moderate, positive relationship between income level and PI for paid MSS.

4.4 Additional analysis of user type

As user type is nominal data, a one-way ANOVA analysis was conducted to compare the effect of user type on PI in the CN user, dual user, and global user conditions. The results showed there were differences between the three groups when it comes to the average PI [$F(2, 458) = 8.70; p < .001; \eta^2 = .037$]. Scheffe post hoc comparisons revealed that the mean PI score for CN users ($M = 4.56, SD = 1.39$) was significantly lower than dual users ($M = 5.16, SD = 1.33; p = .001$) and global users ($M = 5.10, SD = 1.21; p = .036$), which suggested that the participants who only use Chinese MSS were less willing to pay for premium services than those who only use global MSS or use both domestic and global MSS. However, the difference in PI between dual and global users was insignificant.

To further explore the role of user type, three simple regression analyses were performed to observe the model performance in three user types separately. As demonstrated in Table 7 below, results for the CN user group are extremely similar to the previous results for the whole sample (*adjusted R*² = 0.648). However, only three variables of usefulness ($\beta = .32, p < .001$), enjoyment ($\beta = .31, p = .008$), and habit of unpaid listening ($\beta = -.42, p < .001$) are statistically significant predictors for dual users with an *adjusted R*² value of 0.549. Surprisingly, habit of unpaid listening ($\beta = -.69, p < .001$) is the only statistically significant predictor of PI for the global user group, resulting in a high *adjusted R*² value of .75.

Table 7
Results of Regression Analyses in Three User Type Conditions

Predictor	CN user		Dual user		Global user	
	β	p	β	p	β	p
Age	.02	.605	.14	0.169	-.12	.337
Educational level	.00	.922	-.07	0.415	-.06	.566
Income level	.09	.037*	.04	0.694	.01	.959
Usefulness	.20	<.001***	.32	<.001***	.19	.163
Enjoyment	.21	<.001***	.31	0.008**	-.10	.472
Perceived ease of use	.06	0.181	-.07	0.508	.16	.182
Perceived monetary cost	-.17	<.001***	-.14	0.125	-.24	.087
Music affinity	.12	.002**	.02	0.773	-.08	.493
Attitude towards copyright	.10	.011*	.04	0.637	-.05	.654
Descriptive norms	.12	.002**	.00	0.976	.08	.393
Habit of unpaid listening	-.34	<.001***	-.42	<.001***	-.69	<.001***
<i>adjusted R</i> ² :	.65		.55		.75	

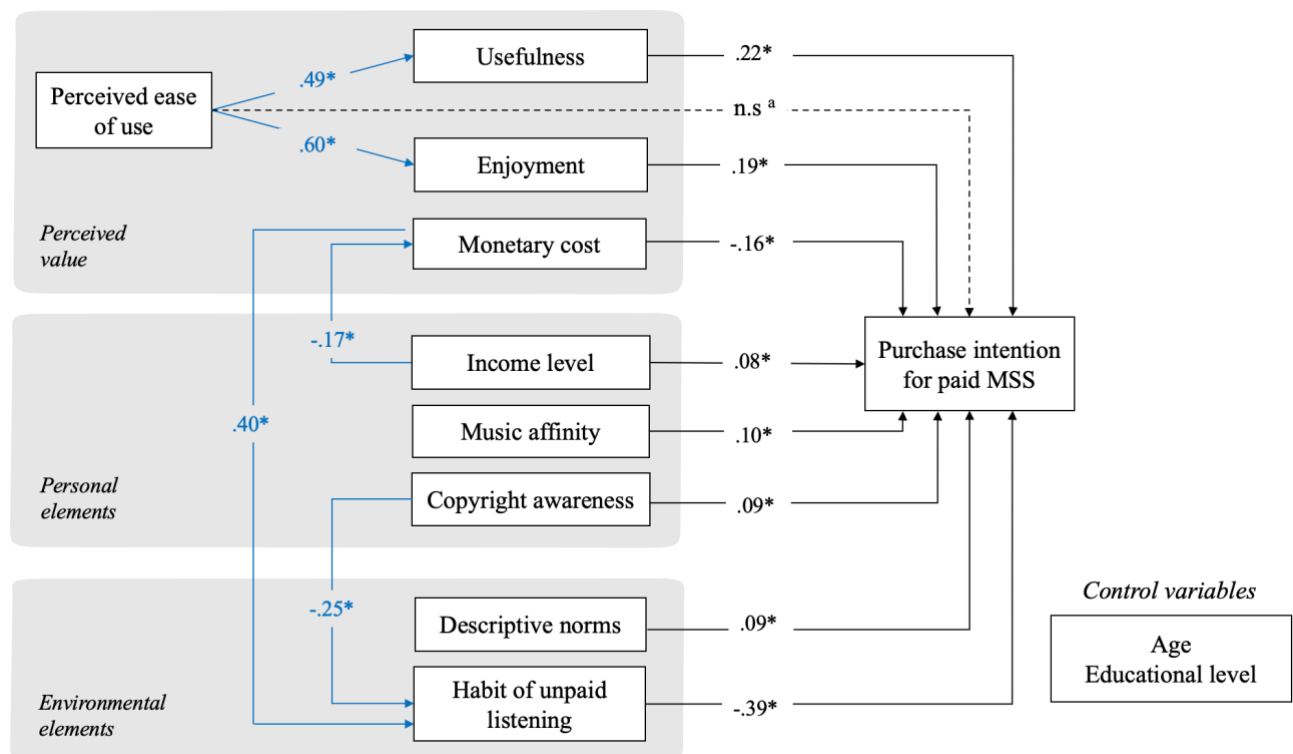
* $p < .05$. ** $p < .01$. *** $p < .001$.

4.5 Validated model

Figure 8 below demonstrates the validated research model with the standardised regression coefficients. Due to the importance of income level shown in the regression analysis, it was moved to be an independent variable within the category of personal elements. The independent variable categories are presented in the grey area. The mediation effect paths are displayed through blue lines. A dashed line is used to show the insufficient direct predictive effect path of perceived ease of use on PI, because it was only significant in the mediation analysis but not in the hierarchical regression model. In this study, the final validated model could explain 64.1% of the variance in PI for paid MSS.

Figure 8

Validated Research Model of Drivers and Inhibitors for MSS Purchase Intention



5 Discussion, limitations, and conclusions

This study investigates the factors influencing the purchase intention of Chinese consumers for paid MSS. Based on a research model integrating the perspectives of SCT and VAM theories, this study conducted an online survey and gathered 461 valid data entries to test nine hypotheses and perform additional analysis of relationships between variables. In this chapter, the main findings, theoretical and practical implications, limitations, and recommendations for future research are discussed, and a conclusion is provided, aiming to answer the following research question:

From an VAM and SCT perspective, what are the drivers and inhibitors of the Chinese consumers' purchase intention for music streaming services?

5.1 Main findings

In order to answer the research question, this study proposed and evaluated the research model on PI for paid MSS, which includes nine independent variables and controls three demographic variables. Based on the SCT and VAM theories, the independent variables are divided into three categories: perceived value, personal elements, and environmental elements. To summarise, the results revealed eight significant predictors of the Chinese consumers' PI for paid MSS, in which usefulness, enjoyment, music affinity, attitude towards copyright, and descriptive norms are the drivers, and perceived monetary cost, income level, and habit of unpaid listening are the inhibitors of purchase intention for MSS. The final validated model could explain the 69.1% of the variance in PI for paid MSS. Because attitude towards MSS subscription, one of the personal elements, was merged with PI in the factor analysis, its effect on PI was not tested in this study.

Within the four perceived value variables adapted from the VAM model, usefulness and enjoyment were found to have a small positive predictive effect on PI. Unlike global services, paid MSS in China use paid music content as the main selling point. However, the results of this study are consistent with previous research, confirming the relationship that users' perceived utilitarian and hedonic benefits are crucial drivers for PI in the Chinese MSS market

(Van der Heijden, 2004; Helkkula, 2016). As Xiang (2016) emphasised, MSS providers in China have been well controlling the quality of paid music superior to free music, which is the basis for both usefulness and enjoyment having essential effects on PI in this domain.

Regarding perceived monetary cost, the results reinforce the current findings in the Chinese context (Z. Wang, 2019) that the perceived financial sacrifice for buying paid MSS is a highly significant predictor that negatively affects PI, although the prices of paid MSS in China are much lower than international services (He, 2021). This may be due to many Chinese consumers being accustomed to unpaid online music listening and relatively susceptible to prices (Z. Wang, 2019). Furthermore, income level was found to have a slight significant positive influence on PI, partially mediated by perceived monetary cost. This study provided empirical support that consumers with lower income are more likely to perceive the price of paid MSS as expensive and thus have a lower intention to purchase paid MSS.

Although the direct effect of perceived ease of use on PI was shown insignificant in the hierarchical regression analysis, the mediation analysis identified it had a highly significant impact on PI as mediated by usefulness and enjoyment. Although users today are increasingly good at dealing with mobile and computer technologies and the learning and using efforts are not as huge barriers as before, the results suggest that non-monetary efforts still significantly affect their perceptions of utility and joy, which is a result in accord with the study conducted by Fernandes and Guerra (2019).

Concerning personal elements, the participants have shown relatively high music affinity. Consistent with previous research (Kinnally et al., 2008; Andersen & Frenz, 2010; Xiang, 2016), the direct positive effect of music affinity on PI for paid MSS was found significant, indicating that music fans tend to be motivated to purchase paid MSS. A possible explanation for this result could be that music fans care more about the quality of music, and purchasing paid MSS allows them to access better music and audio quality. The vast music catalogues on paid MSS could also attract music fans to expand their musical horizons. Another possibility is that music fans have greater appreciation and passion for music, so they are not particularly

concerned about the cost of acquiring music (Kinnally et al., 2008). MSS providers also have targeted marketing such as VIP badges to penetrate the music lover market.

Another personal element is attitude towards copyright. Previous research in China only investigated its moderating role (Z. Wang, 2019) or identified it as an antecedent of attitude towards digital music purchase (Xiang, 2016). The result of this study also provided empirical support for the positive effect of attitude towards copyright on PI for paid MSS. This could be explained as holding a favourable opinion on digital music copyright protection leads to the perceived legitimacy of paid MSS, serving as the incentives for ethically motivated purchases. According to the mediation analysis, habit of unpaid listening could help explain the association between attitude towards copyright and PI for paid MSS.

Last, the results of environmental elements are discussed. Since the scales of descriptive norms were unreliable, it is important to bear in mind the possible bias in these responses and view its positive association with PI cautiously. Nevertheless, the significance of this variable is still worth noting in future research as China is a collectivist society with a high degree of interdependence among the society members (Hofstede Insights, 2021). For example, Xiang (2016) suggested that Chinese consumers seem more used to developing a reference for their behaviour and decisions based on the actions and attitudes of people around them. It can be inferred that the collectivist culture could be a relevant factor influencing consumer behaviour, and thus descriptive norms and other social and environmental factors are interesting to be considered in the Chinese context research.

Among all the independent variables, habit of unpaid listening was shown to be the strongest predictor of PI for paid MSS. This result could be partly explained by people being satisfied with the free alternative for paid MSS, such as the free tier service and digital piracy. As described in the research context section of this paper, the free tiers of MSS in China do not have advertisement breaks between played songs, and music could be pirated by simply searching. Furthermore, the mediation analysis result revealed that habit of unpaid listening mediated the direct effect of perceived monetary cost on PI. Thus, when the users consider the

prices of MSS as high, they would turn to more affordable options and continue the habitual behaviour of unpaid listening, lowering the intention to pay for paid MSS.

The results of additional analysis of user type are interesting. It can be concluded that habit of unpaid listening is the most significant predictor of PI for all three types of users. The direct effects among variables in the responses from the CN users kept the same as the validated research model, while only usefulness, enjoyment, and habit of unpaid listening were significantly associated with PI in the dual user group. One explanation could be that Chinese MSS possess more copyrights to Chinese music than global MSS, making access to paid music the most important feature and reason for using the paid tiers. Unexpectedly, habit of unpaid listening is the only significant predictor of PI in the responses from the global user group, and it accounts for as high as 75% of the variance in PI. However, the explanation of its strong direct impact on the Chinese consumers' PI for global MSS is currently unknown. Although the sample size of the global user group is only 50 and causes limitations to this result, the substantial effect of habit of unpaid listening on PI of Chinese consumers for the global MSS cannot be disregarded and might open up a new line of research.

5.2 Theoretical implication

This study integrates and provides deeper insights into the employment of the VAM and SCT theories. The VAM model contributes the most weight to this research model's explanatory power, showing great applicability in the context of Chinese consumers. However, this paper strongly recommends improving the VAM model by categorising perceived ease of use as an antecedent of usefulness and enjoyment. Learning to use software systems is less likely to be a huge barrier in today's software or app adoption and purchase than before, but perceived ease of use is still related to the perceived utility and joy of using a system and could be associated with adoption and purchase intention indirectly.

This study also contributes to understanding Chinese consumers' perceptions of hedonic systems. Some researchers (Van der Heijden, 2004) have argued that usefulness lost its dominant value in predicting adoption or purchase intention in hedonic information systems.

Nevertheless, this study showed that usefulness and enjoyment are both unique factors worth considering in the MSS studies, and usefulness could be a stronger predictor than enjoyment in systems designed for hedonic purposes.

Moreover, this study is the first research adopting SCT in the MSS consumer behaviour research. After incorporating the elements from SCT theory in the research model, the explained variance of the research model significantly increases by 18.2%, demonstrating that SCT is a valuable complement to the VAM model. SCT contains personal and environmental elements, so it is easily applied to a different cultural context in this domain and serves as a comprehensive theoretical framework.

5.3 Practical implications

From the research findings of this study, several managerial suggestions are proposed for practical practitioners. In the Chinese music streaming industry, exclusive rights on each platform created a cumbersome situation where users must listen to songs across platforms, inhibiting the purchase intention for paid MSS. Owning enjoyable paid music content is not sufficient, as the usefulness of the MSS systems is also an important aspect of consumers' decision-making processes. With the general trend towards shared copyrights, the Chinese service providers should develop new key features for paid versions. These paid features need to be useful and enjoyable enough to make the value gap between paid and free versions of MSS more significant and noticeable, driving free users to become paid users in pursuit of a better music listening experience and richer subscription benefits.

To overcome the barrier of habit of unpaid listening, on the one hand, copyright awareness could be better cultivated through education and media attention, emphasising the importance of paying for music to industry development and artist revenue. On the other hand, MSS providers are advised to improve the royalty sharing system to be fairer to artists and transparent to the public. It is also recommended for MSS providers to establish reasonable pricing strategies to achieve a balance between societal and commercial ethics. It would be smart for MSS providers in China to offer several months of free trial with auto-renewal

payments that can be cancelled at any time, so that people may develop the habit of using premium service. None of MSS in China currently provides consumers free trials as part of their marketing strategy; instead, they only offer discounts and bundles, which may cause hesitation for consumers because they are not used to paying and are unaware of premium content. Switching consumption habits is not easy, so MSS providers need to formulate a suitable business model for this transitioning period.

5.4 Limitations and future research

There are some aspects to take into consideration before drawing conclusions on this study. Many things can be improved in this research. First, the factor of attitude towards MSS subscription was merged with PI in this study. The measurement statements of attitude towards MSS subscription were mainly adapted from previous literature to ensure measurement validity, but it turned out to be quite similar to purchase intention. Thus, the improvement advice for the operationalisation could be explicit statements focusing on the essential characteristics of the subscription model, such as attitude towards ownership, temporary access to music, and intangible streaming format. There could be new factors that have not been studied before, as music streaming is a relatively new business form, and research is needed to dive into consumers' thoughts and perceptions in depth. A qualitative study with a more extensive scale sample is recommended in future research, which may find new research concepts and aspects that can lead to new factors and hypotheses in this domain.

Second, factor analysis showed that habit of unpaid listening was loaded on the first factor with relatively large factor loadings in the negative direction because habit of unpaid listening was operationalised as being very close to being the opposite of purchase intention. Consequently, it is suggested that the research model's final explained variance was likely to be at least slightly higher than it ought to be. Future studies need to pay more attention to precisely operationalise the factors of purchase intention, habit of unpaid listening, and attitude towards MSS subscription, and more self-developed items are recommended.

Third, the reliability of the descriptive norm scales was too low, and only two items of descriptive norms were adopted in the main study. Consequently, any conclusion on the effect of descriptive norms on PI must be carefully considered. Plus, concerning the growing attention to the social functions of MSS, such as music comments and communities, the social influence brought by the community interactions on MSS is advised to be investigated in further research.

Finally, in addition to the mediation models reported above, many other mediation relationships were found during the data analysis phase. The selection of reporting is based on the author's reasoning. Therefore, a selection bias is expected here. More studies need to be undertaken to further investigate the interaction effects among these variables, and structural equation modelling is recommended in future research.

5.5 Conclusion

In a world where music streaming is growing at a rapid pace, compared to Spotify, which already has close to 50% of paying subscribers, paid music streaming in China is only in its infancy. However, very little research has been done in this area. Therefore, this study contributes to the literature by determining the drivers and inhibitors of the Chinese consumers' purchase intention for paid MSS from a theoretical perspective that combines SCT and VAM models.

This study conducted an online survey to measure ten constructs with 461 respondents participating. A hierarchical regression analysis was conducted with three steps to answer the research question. As a result, the final validated model could explain 69.1% of the variance in PI for paid MSS in total, including significant drivers of usefulness, enjoyment, music affinity, attitude towards copyright, descriptive norms, and income level, as well as inhibitors of perceived monetary cost and habit of unpaid listening.

A series of mediation analyses were also conducted and proved the mediator role of habit of unpaid listening, which mediates between the independent variables of attitude towards copyright and perceived monetary cost and the dependent variable PI for paid MSS. Moreover,

perceived monetary cost was found to mediate the impact of income level on PI. Usefulness and enjoyment were also revealed to mediate the effect of perceived ease of use on PI for paid MSS.

In conclusion, this study has proved the adaptivity of the SCT and VAM theories to the research object of Chinese consumers. The VAM model remains a crucial theoretical perspective in the Chinese context. SCT is validated as a useful theory in music purchase intention research, and is a valuable addition to the VAM model that provides a more comprehensive theoretical framework and significantly increases the explanatory power. This study provides findings as the basis for future research in the MSS domain and calls for the importance of habit of unpaid listening in the population of Chinese consumers.

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