

## **CUSTOMER WILLINGNESS TO PAY FOR ONLINE MUSIC: THE ROLE OF FREE MENTALITY**

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### **ABSTRACT**

Free mentality, a strong belief that everything online should be free, has been ironed into people's minds. This concept also significantly affects the development of e-commerce. However, despite the importance of this "free mentality" concept, a lack of systematic investigations inhibits our understanding of this issue. Based on the decomposed theory of planned behavior, this study focuses on free mentality and investigates its direct and interactive effects on the consumer's attitude toward paying, which, in turn, affects the intention to pay for online music services. Data collected from 268 online music users illustrates the direct and negative impact of free mentality on attitude toward paying. The moderating role of free mentality on the relationship between perceived sacrifices and attitude toward paying is also illustrated. At the conclusion of this paper, we discuss the results and their implications for practitioners and academics.

Keywords: Free mentality; Decomposed theory of planned behavior; Online music; Willingness to pay

### **1. Introduction**

The Internet has become one of the dominant channels for information delivery. Online news readers increased from 24% to 44% during the past six years.[Kohut et al. 2010] The population of e-books (through Kindle and iPad), online music, and video on demand (such as Movielink) hint that the Internet has totally changed the way that people receive information. Meanwhile, it is also noticeable that users receive most online services without paying. This "give away for free" phenomenon is driven by the dominant logic: the attraction of a large number of users reflects a high level of advertising revenue. Indeed, after decades of development, this free content business model has been accepted by online service users. As a consequence, a free mentality concept, a strong belief that everything online should be free, has been ironed into people's minds. However, unexpectedly low advertising revenue and constantly increasing maintenance costs make this free content business model difficult to sustain. Some businesses were forced to consider the possibility of charging their users [Shachtman 2002]. Unfortunately, the acceptance rate of paying for online content is extremely low. For example, the Times in the UK started charging their online readers in July, 2010. The visiting number decreased dramatically and only a quarter of their readers showed willingness to pay for online news [BBC 2010]. This phenomenon highlights the critical role of this free mentality.

One of the few exceptions is the music industry, in which retailers/providers are able to charge for online content. For example, Apple's iTunes Music Store achieved dramatic success charging for online music [Austerlitz 2013]. The online music market began to take off after major recording labels licensed their music to legitimate service providers such as Apple's iTunes Music Store. Several researchers noted the strong growth of the online

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music market and predicted that similar levels of growth will be observed in the future. For example, the International Federation of the Phonographic Industry (IFPI) report indicates that revenues received from digital channels were up 6% to US\$4.6 billion in 2010 [IFPI 2011]. The phenomenon of paying fees for online music services has also been happening in Taiwan. Since online music is one of the few cases in which customers are successfully charged, a better understanding of why people are willing to pay for online music will provide an important reference for other industries.

Research on online music services initially focused on pirating behaviors [e.g. Bhattacharjee et al. 2003b; d'Astous et al. 2005; Fetscherin 2009; Kwong and Lee 2002; LaRose et al. 2005; Molteni and Ordanini 2003]. Following that, researchers shifted their attention to consuming behavior. For example, Kwong and Park [2008] conducted research to discover college students' intentions regarding the adoption of digital music services based on the Theory of Planned Behavior (TPB), and Chu and Lu [2007] used the value-intention framework to examine customers' intentions to purchase online music. Although those studies provided some empirical evidence for understanding the drivers of behavioral intention, some questions remain unanswered. First, past studies either adopted one perspective or used a simplified model (for purposes of parsimony). For example, Chu and Lu adopted the value perspective and ignored the role of subjective norm and perceived behavioral control. Even though TPB was adopted in the study by Kwong and Park [2008], the use of traditional TPB (including attitude, subjective norm, and perceived behavioral control only) does not allow the exploration of the determinants or components of these elements. Secondly, and more importantly, none of them consider that the effect of free mentality restricts the development of certain business models on the Internet. Excluding this variable while attempting to understand individuals' paying intention undermines the completeness of the findings. Therefore, the limited foci of previous studies highlight the need to investigate the impact of free mentality.

Given the important role of free mentality and the limitations of previous studies, the purpose of this study, based on decomposed TPB, is to take free mentality into consideration and to understand how, through altering the attitude toward paying, it affects the intention to pay. In addition to studying the direct relationship between free mentality and attitude, we also explore the interaction of free mentality with other antecedents of attitude, i.e., "perceived benefits and sacrifices." Through synthesizing the relevant constructs and understanding the role of free mentality, this study aims to contribute to Internet service studies by highlighting the need to incorporate free mentality into research design. At the same time, we derive guidance and suggestions for practitioners or business owners.

The paper is organized as follows. We first review the online music studies and the theory of planned behavior. In the second section, we thoroughly describe the concept of free mentality, and provide the research model and resultant hypotheses. In the third section, we discuss the questionnaire development and data collection process. The fourth section includes the data analysis procedure and a relevant discussion. Lastly, we provide our conclusions and our suggestions for academics and practitioners.

## 2. Literature Review and Hypothesis Development

### 2.1. Online Music

Recently, advanced hardware/software and broadband technology have enabled not only massive file swaps on the Internet, but also an increasing number of fee-based online service providers. One of the major Internet services is online digital music which allows customers to download, save and play music on different devices. The business model for the music industry has changed from sale to access, and the result is that music downloading continues to grow globally [IFPI 2009; Kleinschmit 2007; Walsh 2004]. Digital platforms accounted for around 20% of recorded music sales. The number of digital downloads increased by 15% in 2007 and 25% (US\$7 billion) in 2008 [IFPI 2009]. iTunes is the leading player in the online à-la-carte download market [IFPI 2009; Joyce 2008; Kleinschmit 2007] and had revenues of over US\$840 million in 2008, following its peak revenues in 2006 [Kleinschmit 2007]. Moreover, several fee-based online music providers have been entering the downloaded music market over the last few years, including BSkyB in 2009 (in the UK and Ireland), Sky in 2009 (UK), Neuf Cegetel in 2007 (France), DNA in 2008 (Finland), Mixup in 2009 (Mexico), etc. [IFPI 2009]. However, in spite of the growth of authorized music downloads, online file-sharing continuously and strongly affects the music market. It dramatically reduces sales of authorized music. According to data collected from 16 countries, estimated unauthorized file-sharing was over 40 billion files in 2008. This implies that about 95% of downloaded music tracks are pirated [IFPI 2009]. Since the high pirating rate seriously damages the music industry, there is a critical need to explore the antecedents that drive individuals to pay.

Early research into the development of the online music market can be classified into several major streams. Behavioral researchers attempted to understand the drivers of piracy behaviors [e.g. Bhattacharjee et al. 2003b; d'Astous et al. 2005; Kwong and Lee 2002; LaRose et al. 2005], economists aimed at revealing the impact on online

music [e.g. Bhattacharjee et al. 2003a; Power and Jansson 2004], and management-oriented studies focused on the development of new business models [e.g. Buxmann et al. 2007; Fox 2004; Molteni and Ordanini 2003].

Recently, researchers began to pay attention to consumer behavior as the online music market continued to grow. For example, Kwong and Park [2008] used modified TPB to conduct research to discover college students' intentions toward the adoption of a digital music service, and Chu and Lu [2007] used the value-intention framework to examine customers' intentions regarding purchasing online music. As shown above, customers' willingness to pay for a fee-based online music service has rarely been investigated. In addition, Chu and Lu [2007] adopted a value perspective and examined the determinants of customer value. While perceived value is similar to attitude, defined as the comparison of benefits and costs, Chu and Lu [2007] found that perceived benefits and sacrifices determine value, which, in turn, affects purchase intention. On the other hand, even though Kwong and Park [2008] incorporate perceived usefulness, perceived ease of use, and perceived service quality as antecedents, they reached a conclusion similar to general TPB studies in that intention is a function of attitude, subjective norm, and perceived behavioral control. However, it is noticeable that the former study includes attitude and its antecedents only, and the latter study does not decompose variables.

Furthermore, the characteristics of online consumer behavior are different from those in a traditional context. Specifically, many service providers on the Internet provide free content to attract customers. In addition, the interactive nature of the Internet reduces the power of service providers to control the timing of the delivery of the content (or advertisement). Therefore, there is a need to take the free mentality concept into consideration while attempting to understand willingness to pay.

## 2.2. Free Mentality

Giving content away for free has been a popular business model since the introduction of radio and television. In this business model, service providers generate the content and deliver it through audio (radio channels) or video (TV channels). Customers need to pay for the receiving devices but not the content. Since customers do not have to pay for the content, revenue generation largely relies on advertising. In general, popular programs attract a larger audience, and advertisers pay more money for advertising in those programs. Additionally, music delivered on these programs serves as promotional material. Customers are encouraged to purchase music CDs or tapes after receiving those promotions.

As the Internet is getting popular, this "free content" business model has been broadly adopted. Many service providers are dedicated to providing free online content and services in order to attract more customers and expand market share. It is believed that service providers can charge more advertising fees if more people access their websites. As an outcome, many Internet consumers have developed a belief that online businesses should not charge customers since they have generated significant income from advertising [Dou 2004]. In addition, some peer-to-peer software programs allow consumers to exchange digital music without charging any money. These drivers lead customers to believe that most music materials on the Internet should be free [Filo and Wang 2011]. For example, in a survey conducted by Vlachos et. al. [2003], the majority of the respondents (65%) believed that online music should be free. Consequently, it is extremely challenging to ask customers to pay for certain services [Mangalindan 2002; Pauwels and Weiss 2008]. Chyi [2005] also found that most online users have no intent to pay for online content.

Another significant outcome identified by the literature is that customers may perceive a certain degree of unfairness when they are asked to pay for the content [McDonald 2002; Taylor 2001; Wang et al. 2005]. Unfairness reflects the customer's perception that paying is not necessary since service providers can receive money from advertisers. However, banner style advertising on the Internet did not result expected outcome because, unlike advertising on conventional channels in which customers are forced to receive the marketing message before they can continue receiving content, customers can ignore the ads while utilizing services. Therefore, a low click rate is observed. Relying on advertising revenues alone is insufficient for most online business [Addison 2001; Turban et al. 2002].

In addition, digital music files can be found in many places on the Internet, either legally or illegally. As an outcome, many online music providers began to offer various add-on services and charge customers fees for access to online content and services [Goldman 2001; Olsen 2001; Prasad et al. 2003; Taylor 2001]. While content provided is critical, consumers' willingness to pay is strongly associated with their participation in the online community, generally offered in the form of add-on services [Oestreicher-Singer and Zalmanson 2013]. Thus, it is critical to understand whether or not people are willing to pay for the content and services. However, since a significant number of people have developed a free mentality which drives them to believe that "everything on the Internet should be free," there is a need to take free mentality into consideration while attempting to explore consumers' willingness to pay for online services.

### 2.3. Decomposed TPB

The theory of planned behavior (TPB) is broadly adopted by academic researchers to explain an individual's intention and actual behavior. Compared with similar theories, TPB has been shown to better explain users' Internet behavior [Klobas 1995]. Recently, TPB has been adopted to understand students' intention to subscribe to digital music. Kwong and Park [2008] incorporated the technology acceptance model and service quality into TPB and proposed that perceived ease of use, perceived usefulness and perceived service quality have impacts on subjective norm, perceived behavioral control, and attitude. Aligning with traditional TPB, they found that intention is a function of subjective norm, perceived behavioral control, and attitude. However, the purpose of their study was to integrate different theoretical perspectives and, therefore, less attention was paid to the content of each element of TPB. As noted by Taylor and Todd [1995], there is a need to decompose attitude from beliefs to better understand the belief structures and behavioral intention. Researchers confirm that decomposed TPB has equal or higher explanatory power than other intention-behavior based theories [Chau and Hu 2001; Shih and Fang 2004; Taylor and Todd 1995]. Therefore, this study adopts a decomposed TPB concept to understand the drivers of willingness to pay for online music. Furthermore, the adoption of decomposed TPB also affects the selection of variables. All variables are based on the TPB framework and, therefore, some variables considered by other studies (e.g., loyalty) are not included.

In this study, intention is represented by an individual's willingness to pay for fee-based online music services. According to decomposed TPB, the intention of paying for online music is affected by three constructs: (1) attitude, which describes an individual's degree of favorability toward subscribing to fee-based online music services; (2) subjective norm, which describes internal and external social influences that have an effect on an individual's intention to subscribe to fee-based online music services; and (3) perceived behavioral control, which describes an individual's cognition of intellectual property rights, and his/her belief about having necessary resources and opportunities to pay for fee-based online music services. Our research model is shown in Fig.1. The individual's willingness to pay for fee-based online content is the dependent variable. Independent variables include attitude (formed by perceived benefits, free mentality, and perceived cost), subjective norm (formed by interpersonal influence and external influence), and perceived behavioral control (formed by ethical self-efficacy and controllability). Since the focus of this study is online paying intention, decomposed TPB is therefore adopted to explore factors affecting the customer's intention to pay for online music services.

### 2.4. Hypotheses

The research model of this study is presented in Figure 1. The final dependent variable is willingness to pay, which refers to the extent to which individuals are willing to spend money on acquiring music and additional services provided by online music websites. Willingness to pay (WTP) for online music services is a function of attitude toward paying, perceived behavioral control, and subjective norm, according to theory of planned behavior [Ajzen 1991; Ajzen 2002]. First, perceived behavioral control includes controllability and ethical self-efficacy. The focus of this study is paying for online music services and, therefore, whether or not the price is affordable to individuals should be included [Notani 1997]. Furthermore, downloading pirated music is not uncommon and, therefore, whether or not one can avoid pirating when it is possible should be taken into consideration [Kuo and Hsu 2001]. The frequently used variable "facilitating condition" is not included because online music service systems are very easy to use and, therefore, technical support is not needed. Second, subjective norm is formed by interpersonal and external influence [Bhattacharjee 2000]. In addition to interpersonal influence, influence from mass media, government and experts is included in this study because the pirating issue has been noticeable and public agents have made many attempts to thwart it. Third, attitude toward paying is affected by three factors: perceived benefit, perceived sacrifice, and free mentality [Kim et al. 2007]. Perceived benefit includes both the expected outcome and value added services. These two components are included because the former is the core and the latter is a major byproduct of online music services. Some frequently used variables, such as perceived functional and social value, are not included because functional value is covered by expected outcome, and paying for legal music may not provide additional social value since pirated music is available. Perceived sacrifice includes direct monetary costs and possible risks such as system failure and information leakage.

#### 2.4.1. Attitude and Willingness to Pay

Attitude is defined as one's feeling of favorableness or aversion toward the behavior in question [Ajzen and Fishbein 1980; D'Ambra and Rice 2001]. It is one of three major factors which determine a person's behavioral intentions [Ajzen and Fishbein 1980]. In this research, attitude toward behavior refers to a customer's feeling of favorableness toward paying for the fee-based online music services. According to TPB, one's intention toward conducting certain behavior is strong when one's attitude toward conducting the behavior is high [Ajzen and Fishbein 1980]. This concept has been broadly examined [Fishbein and Ajzen 2009]. Thus, following the well established concept, we built the link between attitude toward paying and paying intention.

H1: An individual's paying attitude positively affects his/her willingness to pay for fee-based online music services.

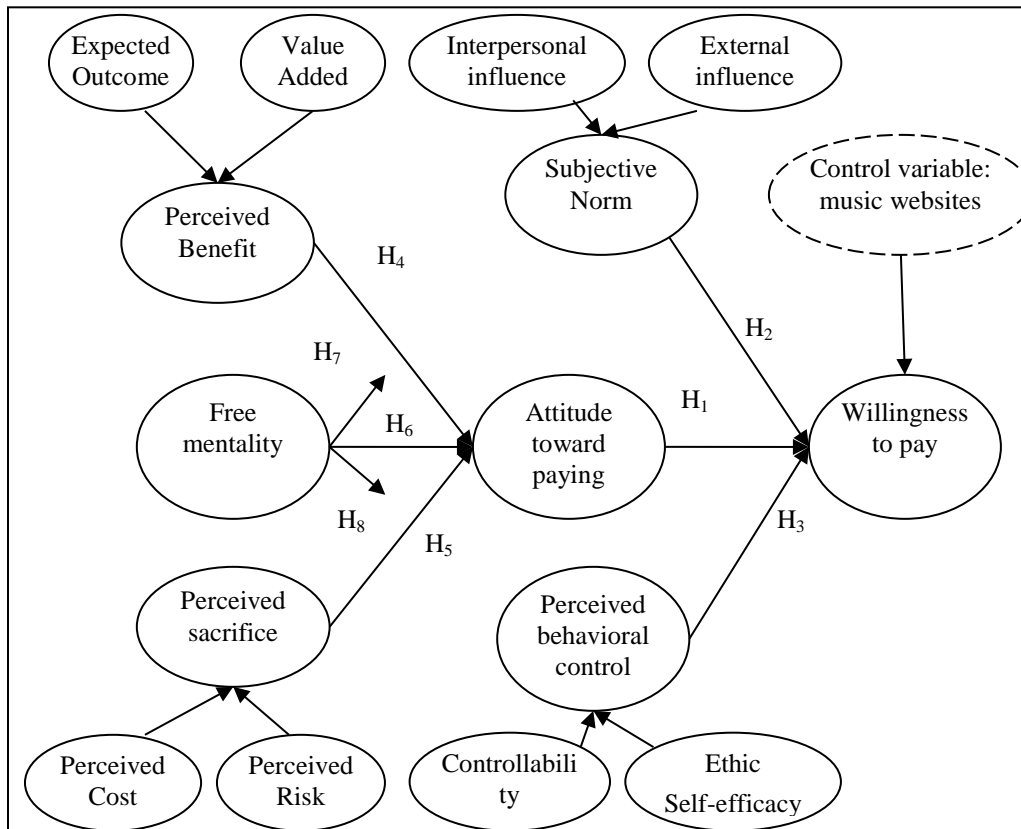


Figure 1: Research Model

#### 2.4.2. Subjective Norm and Willingness to Pay

In the context of subscriptions for fee-based online music services, subjective norm reflects the social influence on customers' willingness to pay for the services. We followed Bhattacharjee's [2000] study and decomposed subjective norm into interpersonal influence and external influence. Interpersonal influence refers to word-of-mouth influence by the perception of some important references (i.e., relatives, friends, peers, etc.) regarding his/her behavior [Bhattacharjee 2000]. The intention toward conducting a certain behavior is strong when performing that behavior is encouraged by the surrounding people [Hung and Chang 2005; Hung et al. 2006a; Lin 2007].

External influence refers to informational stimuli from the external environment (e.g., mass media reports, expert opinions, government policies, etc.) which drives individuals to perform the behavior [Bhattacharjee 2000]. For example, the intention to pay for online music may be higher after watching TV commercials, reviewing advertising flyers, and attending anti-piracy based exhibitions or workshops hosted by the government or music companies [Hung and Chang 2005; Hung et al. 2006a; Lin 2007]. Therefore, we hypothesize the following.

H2: Subjective norm positively affects a person's willingness to pay for fee-based online music services.

#### 2.4.3. Perceived Behavioral Control and Willingness to Pay (WTP)

Following Ajzen's [1991] discussion of perceived behavioral control (PBC), this construct has two distinct dimensions: self-efficacy (SE) and controllability. According to social cognitive theory, a person's self-efficacy regarding specified conduct plays an important role in exercising or changing these actions [Bandura 1986]. Empirical studies in the IS area have shown that individuals' computer self-efficacy is one of the critical antecedents of behavioral intention [e.g. Vijayasarathy 2004]. Instead of studying customers' self-efficacy in using legal software or content, we consider people's SE in downloading illegal software because the music industry suffers from monetary losses resulting from illegal downloads. Following Kuo and Hsu's [2001] idea about ethical computer self-efficacy, ethical self-efficacy can be viewed as the extent to which people believe that they will refuse to consume pirated music when it is available. LaRose et al. [2005] discovered that belief in the moral unacceptability of file sharing behavior was a significant negative predictor of unauthorized music downloading

behavior. Therefore, we predict that self-efficacy is positively associated with paying intention. That is, individuals' intention toward paying is higher when they possess a higher level of ethical self-efficacy.

While SE is defined as an individuals' confidence in his/her ability to perform the behavior, controllability refers to one's belief that performing a behavior is up to oneself [Ajzen 2002]. Applied to WTP for fee-based online music services, controllability can be seen as an individual's power of decision to pay for fee-based online music services. For example, although the subscription fee is not high, the individuals' ability to pay still plays a role. People are more willing to pay when the subscription fee is affordable. Thus, we hypothesize as follows.

*H3: Perceived behavioral control positively influences a person's willingness to pay for fee-based online music services.*

#### 2.4.4. Antecedents of Attitude

Various factors contribute to the formation of one's attitude toward paying. Those factors can be classified into benefits and sacrifices [Kim et al. 2007]. In addition to those proposed factors, we further propose free mentality as one critical antecedent of attitude toward paying. In the following, we introduce these three factors and their individual impacts on the formation of attitude.

##### *Perceived Benefit*

Online music should be viewed as an online service instead of a pure product. In addition to the quality of product (expected outcome), features which can enhance the quality of experience (added value) also play a role during the evaluation process. Therefore, this research considers two types of benefits: added value and expected outcome. First, the value of products or services is increased when more additional free features are embedded. In addition to downloading music, many online music providers offer additional services for their customers (e.g., allowing for creating a blog, making one's own music lists, building an online social network with people having similar habits, navigating through information with efficiency, providing substantial information about singers/songs for making better purchasing decisions, supporting easier functions for creating a listening list, etc.). Those value-added features in general are proprietary and differentiating, of superior quality, with exclusive value, or able to meet more emotional/passionate needs [Elkin 2002; Wang et al. 2005]. We argue that those features play an important role in attracting customers since people can easily access other resources to get pirated music. They make paying for online music worthwhile for customers.

Second, expected outcome can be viewed as the most salient driver of behavioral attitude. Behavioral beliefs can be viewed as the expectation of attaining an outcome by performing the behavior [Ajzen and Fishbein 1980]. Individuals possess a positive attitude toward an objective when desirable consequences are expected to happen or when undesirable consequences are expected not to happen [Vroom 1964]. Compeau and Higgins [1995] pointed out that expected outcome is directly related to affect (one type of attitude). In their study about piracy behavior, Peace et al. [2003] adopted TPB and indicated that expected outcome, including punishment certainty and punishment severity, is strongly related to behavioral attitude. In this study, expected outcome is defined as an individual's assessment of utility, which includes product-related attributes and the physical components of the product. Based on this concept, customers of subscription fee-based online music services expect a sufficiently high quantity and a wide variety of music, all of which should be easy to find. People feel that paying is worthwhile when they can access various types of music, or even hard to find music.

According to the above discussion, perceived benefit, composed of expected outcome and added value, is considered a critical antecedent of attitude toward paying. Therefore, we hypothesize the following.

*H4: Perceived benefit will positively influence a user's attitude toward willingness to pay.*

##### *Perceived Sacrifice*

The behavioral intention of customers is influenced by their valuation of the service, which is related to the perceived cost [Shin 2009; Wu and Wang 2005]. Perception of value (attitude) involves a trade-off between positive attributes and negative attributes [Dodds et al. 1991; Kim et al. 2007; Lu and Lin 2012; Teas and Agarwal 2000]. Attitude toward paying tends to be low when consumers find that the sacrifices that need to be made are high. Therefore, in addition to the benefits indicated above, we also attempt to explore the impact of the negative attributes. Specifically, we predict that perceived sacrifice will have a negative effect on consumers' attitude toward paying.

Sacrifice describes what must be given up or paid to perform a certain behavior [Chu and Lu 2007]. It can be monetary or non-monetary. For the first type, product price can be viewed as the most direct monetary sacrifice [e.g. Monroe and Krishnan 1985]. Zeithaml [1988; 2002] indicated that shoppers usually see price as an important cost component. Perceived cost lowers the value of a product or service as perceived by customers [Tam 2004], and has a negative impact on customers' attitude toward paying [Chu and Lu 2007; Kim et al. 2007]. The increase in service fees leads consumers to stop paying or switch to another service provider with lower prices.

In addition to monetary costs, non-monetary costs should also be taken into account [Saracevic 1997; Thaler 1985; Zeithaml 1988]. Those non-monetary costs may be time, effort, and other unsatisfactory spending for the purchase and consumption of the product [Kim et al. 2007]. For example, ease of use is considered a non-monetary cost online music and mobile Internet services studies [Chu and Lu 2007; Kim et al. 2007]. However, given that the design of contemporary website is easy to use and that risk has become one of the most critical factors which affect the adoption of e-commerce, we adopt perceived risk to represent non-monetary cost in this study. The literature has indicated that perceived risk is one of the important antecedents of attitude [e.g. Agarwal and Teas 2001] and online shopping behavior [Forsythe and Shi 2003]. Among those identified non-monetary risks, two of them are more critical in the online music context. *Performance risk* represents customers' concerns regarding unreliable infrastructures or service provided. Consumers consider this issue because response speed and reliability often suffer as the number of subscriptions increases. The *psychological safety risk* refers to privacy violations, or negative emotions such as disappointment or frustration, which may block users from providing their personal information on the Internet [Einwiller and Will 2001; Hoffman et al. 1999; Jacobs 1997].

*H5: Perceived sacrifice negatively influences users' willingness to pay for online music.*

#### *Free Mentality*

Since the early 1990s, online service providers have kept trying to attract people with free services (e.g., free email, free online storage, free trial software, etc.). The content of most websites is given away for free and available to all comers. The main idea of this established business model is to increase traffic through providing free services so as to gain revenue from advertising [Werbach 2000]. Most Internet users received free services and information the first time they accessed the Internet [Coupey 2001]. As a result, "free" became a well-accepted norm in the world of the Internet. A mental model that everything should be free online started to root in most users' minds. This "free" idea is continuously reinforced by many online service providers. This can be observed even in a B2B context. As Schultze and Orlikowski [2004] reported, agents of the case company threatened to sue their business partner for blocking them out of the quoting service because this violated their constitutional right to access a "free Internet service."

However, constantly increasing maintenance costs and limited advertising revenue hint at the need to charge for online services in order to avoid bankruptcy and maintain reasonable profits. When free goods and/or services turn to paid service, free mentality serves as a strong belief that exerts a strong influence on the attitude toward paying [Dou 2004]. For example, Vlachos, Vrechopoulos, and Doukidis, [2003] pointed out that the majority of their survey respondents believe that online music should be free. Ye et al. [2004] provided a plausible explanation for this phenomenon. They indicated that "the services have been free, why should I pay for them now?" is a common belief for those who have low willingness to pay for online service because "online services are supported by advertising revenue and, therefore, do not need to charge customers."

Empirical studies have also shown that free mentality has a negative impact on paying intention in the context of a clipart website [Dou 2004]. Therefore, we hypothesize the following.

*H6: Free mentality negatively influences a user's attitude toward paying for online music.*

#### *The Moderating Role of Free Mentality*

In this research, we take a further step to explore the moderating role of free mentality on the relationships between perceived benefit and attitude, and between perceived sacrifice and attitude. First, perceived benefit is expected to have a positive impact on attitude toward paying. This positive relationship should be observed at any level of free mentality, but with varying strength. We believe that, for people with low free mentality, the impact of perceived benefit on paying attitude may not be as strong as it is for those with a higher level of free mentality. Although people are more willing to pay for high-benefit service, the "user pays" idea drives them to pay appropriate money for what they can receive. For customers with high free mentality, they tend to believe that users should not be charged because pay-based services are similar to other free services provided (e.g., free news). In addition, people with a high level of free mentality are less likely to change their perception even when the perceived benefits are increased (via value-added features or services). In contrast, people with low free mentality are more likely to pay for those value-added services. For example, Oestreicher-Singer and Zalmanson [2010] indicated that people are more willing to pay for the subscription fee when they are highly engaged in the community. Therefore, we hypothesize the following.

*H7: The relationship between attitude toward paying for online music and perceived benefit is stronger when free mentality is low.*

Perceived sacrifice is expected to reduce attitude toward paying. Even though the subscription fee for online music is not high (Napster charges US\$12.95/month, Rhapsody charges US\$12.99/month, SuperPass charges US\$10/month, and KKBox [Taiwan] charges US\$6.2), a subjective evaluation of the cost still generates a negative effect. We further argue that this effect will be stronger when one possesses high free mentality. Since paying for

online music is not favorable for those who believe all content on the Internet should be free, we expect that they tend to consider paying as unwise when they consider the cost to be high. Therefore, their attitude toward paying drops dramatically as the perceived cost increases. Paying for content has not been rooted in the minds of people with low free mentality. Even though increasing cost has a negative impact on attitude toward paying, the magnitude is much lower. Thus, we hypothesize as follows.

*H8: The relationship between perceived sacrifice and attitude toward paying for online music is stronger when free mentality is high.*

### 3. Research Methods

#### 3.1. Pre-test and Pilot Test

Pre-test and pilot tests were both conducted to validate the instrument. The first draft questionnaire was administered via face-to-face interviews with six students who were experienced online music users. Feedback from the interviews included the length of the instrument, the format of scales, question ambiguity, misused terminology, and suggestions about the unlisted important factors. Then, several academics reviewed the second draft to ensure the clarity of the instrument. A pilot test was conducted with 30 voluntary college students who had relevant online music experience. Pilot study respondents were asked to fill out the questionnaire and make suggestions for improvements when instructions or question were not clear. The collected data from the pilot test were examined for reliability and construct validity. The exploratory factor analysis results revealed a precise number of factors and showed all items to be located within the expected factors. We believe that the content validity of the instrument was ensured through the above processes.

Table 1: Demographic Characteristics of the Sample

Demographic Variable	Categories	Sample Composition (N=267)
Gender	Male	157 (58.6%)
	Female	111 (41.4%)
Age	20 or less	65 (24.3%)
	21-30	183 (68.3%)
	31-40	19 (7.1%)
	41-50	1 (0.4%)
	51 or more than	0 (0%)
Education	Under College	6 (2.2%)
	Bachelor	222 (82.8%)
	Master	39 (14.6%)
	Ph D.	1 (0.4%)
Occupation	Student	195 (72.8%)
	Worker	58 (21.6%)
	Other 1	11 (4.1%)
	Other 2	4 (1.5%)
Wages	20,000 or less	208 (77.6%)
	20,000 - 40,000	54 (20.1%)
	40,000 – 60,000	3 (1.1%)
	60,000 – 80,000	2 (0.7%)
	80,000 – 100,000	1 (0.4%)
	100,000 or more than	0 (0%)
Internet usage (per day)	1 hr or less	20 (7.5%)
	1 – 2 hrs	52 (19.4%)
	3 – 4 hrs	61 (22.8%)
	5 – 6 hrs	49 (18.3%)
	7 – 8 hrs	39 (14.6%)
	9 – 10 hrs	13 (4.9%)
	10 hrs or more than	34 (12.7%)

#### 3.2. Data Collection

A survey was conducted to examine the proposed hypotheses, above, and an online questionnaire survey was used to collect data. The online survey was employed because this study targeted those interested in online music and familiar with the Internet. Furthermore, in recent years, online surveys have been used increasingly in social



science research because of their relative strengths, including low cost, widespread reach, speed, convenience, and ease of data entry and analysis [Cheong and Park 2005; Evans and Mathur 2005; Johnson 2006]. Over a three-week period, a message was posted on several popular music-related forum websites including KKBOX (<http://kkbox.com.tw>) and ezPeer ([www.ezpeer.com.tw](http://www.ezpeer.com.tw)), and on campus bulletin board systems in Taiwan. The message included a hyperlink to the survey form and asked participants to fill out the questionnaire, indicating any paid online music websites they had used or known. The possibility of repeated responses were minimized because (1) in the consent form, respondents were asked not to repeatedly fill out the instrument, and (2) we provided no extrinsic reward for filling out the survey. In addition, a few criteria were used to screen out atypical cases. For example, the question “Have you ever paid any website for obtaining online music services?” was aimed at excluding people who did not have experience in paying for online music websites but had mistakenly linked to our survey website. A total of 280 people filled out the questionnaire. The final sample size was 268 after removing incomplete cases. Table 1 shows the demographic information of collected respondents. About 59% of respondents were male, which is consistent with Lin and Bhattacharjee [2010]. The respondents were relatively young (about 93% were under 31 years old) and either studying in college or holding a Bachelor’s degree (about 83%). We consider the structure of our sample acceptable because of its similarity to other Internet-related studies [Hsu and Chiu 2004b; Hung et al. 2006b; Liao et al. 2006; Shin 2008].

### 3.3. Constructs and Measurements

Multi-item scales adapted from prior research were used to measure all research variables. All questions were in Likert scale format with anchors from 1 (strongly disagree) to 7 (strongly agree). Table 2 lists the final questionnaire items used to measure each construct. Among all constructs, the measurement items of free mentality, perceived benefit, and perceived risk were adapted from Dou [2004]. Items adapted from Hsu and Chiu [2004a] were used to measure interpersonal influence and external influence. The measurement items of perceived cost were adapted from Chiu and Lu [2007]. The measurement items of ethical self-efficacy were adopted from Kuo and Hsu [2001].

Several constructs, including perceived benefit (comprised of expected outcome and value added), perceived sacrifice (perceived cost and sacrifice), perceived behavioral control (controllability and ethical self-efficacy), and subjective norm (external and internal influences) are treated as second-order formative constructs formed by various reflective first-order constructs [Petter et al. 2007]. Therefore, PLS was used to validate the quality of the measurements and to test the hypotheses since it allows latent constructs to be modeled either as formative or reflective indicators [Chin 1998]. We first examined the validity of the reliability of first-order reflective constructs. In particular, PLS Graph 3.0 was used to evaluate the measurements and structural models. As shown in Table 2 and Table 3, all analysis results satisfy the minimum requirements, and the reliability and validity of our measurements are ensured.

For reliability testing, factor loadings higher than 0.7 can be viewed as having high reliability, and, to ensure reliability, factors with loadings lower than 0.5 should be dropped. Convergent validity should be ensured when multiple indicators are used to measure one construct. Composite reliability and variance extracted by constructs (AVE) with cut values of 0.7 and 0.5, respectively, have been recommended [Fornell and Larcker 1981; Kerlinger 1986]. Lastly, to have the required discriminant validity, the correlation between pairs of constructs should be lower than 0.90 and the square root of AVE should be higher than the inter-construct correlation coefficients [Bagozzi et al. 1991; Chin 1998; Fornell and Larcker 1981].

The multidimensional nature of perceived benefit, perceived sacrifice, perceived behavioral control and subjective norm makes them formative second-order constructs [Petter et al. 2007]. After ensuring the validity and reliability of those first-order reflective constructs, approaches suggested by Pavlou & El Sway [2006] were used to verify the existence of second-order formative constructs. First, the relative weights of the first-order constructs are all significant. Second, the moderate level of correlation coefficients among variables indicates that a reflective model seems less likely. Finally, using regression analysis on the three first-order constructs with performance, low multicollinearity (exhibited by the low VIF value) indicates that these three dimensions represent different meanings and should not be treated as reflective.

Two additional tests were performed in order to ensure the findings were not affected by research design and data collection. First, common method bias should be examined when both independent and dependent variables are collected simultaneously from the same respondent. We used Harman’s single factor analysis to examine common method bias in our data. The test result shows that exactly the same number of factors (as expected) is extracted when all items are included in exploratory factor analysis. Second, in order to detect any non-response bias, we assume that late respondents are similar to non-respondents [Armstrong and Overton 1977] and, therefore, we compare the early and late respondents on all variables. The results show no significant differences between these two groups in all constructs (including demographic variables). Therefore, we believe that non-response bias may not distort the credibility of the following analysis.

Table 2: Summary of Measurement Scales

Construct	Measure	Loading
Expected Outcome ( <i>Alpha</i> = 0.857; <i>CR</i> :0.893; <i>AVE</i> :0.583) About the fee-based music website...		
PB1	I can access a great amount of music with very low price.	0.750
PB2	I can access music that I like more convenient and faster.	0.812
PB3	I can find any kind of music there.	0.799
PB4	I can get rich information about music (such as artists, singers, and etc).	0.765
PB5	It can provide a pleasant leisure time.	0.745
PB6	I can share my perspectives with people have similar interests.	0.708
Value Added ( <i>Alpha</i> = 0.826; <i>CR</i> :0.873; <i>AVE</i> :0.534) While accessing fee-based music website ...		
PB7	I can find the latest released music.	0.745
PB8	I can customize my personal music play lists.	0.722
PB9	I can watch music videos.	0.727
PB10	I can learn about the latest music-on-demand billboard.	0.685
PB11	I don't have to keep and organize physical CD.	0.721
PB12	In general, I feel that the subscription of fee-based online music service is beneficial.	0.783
Perceived Cost ( <i>Alpha</i> = 0.873; <i>CR</i> :0.915; <i>AVE</i> :0.730) In terms of the cost of accessing the music website, I feel that ...		
PC1	the payment is high	0.916
PC2	the monthly subscription fee is expensive	0.729
PC3	paying the monthly subscription fee is a burden to me	0.937
PC4	the cost for using this website is high	0.819
Perceived Risk ( <i>Alpha</i> = 0.823; <i>CR</i> :0.895; <i>AVE</i> :0.740) I think the fee-based music website ...		
PR1	may not be able to provide reliable service	0.870
PR2	may have risk of personal privacy information leakage	0.884
PR3	may have risks of music download failure	0.825
Free Mentality ( <i>Alpha</i> = 0.934; <i>CR</i> :0.957; <i>AVE</i> :0.883) For fee-based online music, I think ...		
FM1	all these music should be free	0.964
FM2	providing free music fits into the original purpose of the Internet (to provide free information)	0.968
FM6	in general, music website should provide free music.	0.883
Interpersonal Influence ( <i>Alpha</i> = 0.937; <i>CR</i> :0.955; <i>AVE</i> :0.841) ... I should pay for listening to online music		
II1	My family members think that,	0.868
II2	My colleagues think that,	0.957
II3	My friends think that,	0.937
II4	People who I know think that,	0.904
External Influence ( <i>Alpha</i> = 0.865; <i>CR</i> :0.899; <i>AVE</i> :0.598) ..... paying for the online music is a correct conduct		
EI1	Most medias that I access everyday keep reporting that	0.719
EI2	The general mass media hold positive sentiment that ...	0.798
EI3	Government strongly advocates that ...	0.794
EI4	School strongly advocates that ...	0.777
EI5	The mass media persuades me that ...	0.750
EI6	Experts in related areas hold a positive sentiment that ...	0.798
Attitude toward Behavior ( <i>Alpha</i> = 0.928; <i>CR</i> :0.949; <i>AVE</i> :0.822)		
AB1	Paying for listening to the online music would be a right idea.	0.933
AB2	Paying for listening to the online music would be a foolish idea. (R)	0.844

AB3	Paying for listening to the online music would be a good idea.	0.937
AB4	Paying for listening to the online music is for sure.	0.911
Controllability ( $\alpha = 0.719$ ; $CR:0.836$ ; $AVE:0.632$ ) For the fee-based music website, I think ...		
CO1	The monthly fee is affordable to me	0.843
CO2	Paying the monthly fee is a burden to me (R)	0.655
CO3	Software provided by the website is easy to use	0.870
Ethic Self-Efficacy ( $\alpha = 0.934$ ; $CR:0.953$ ; $AVE:0.835$ ) According to the belief of copyright, ...		
ESE3	When you badly need a single/album but do not have time to purchase it, how confident are you to refuse to use an illegal copy of that music.	0.903
ESE4	When you badly need a single/album and have opportunity to access to an illegal copy without anybody else's knowing, how confident are you to refuse it.	0.892
ESE5	When you are going to buy a single/album and have seen other colleagues use an illegal copy, how confident are you not to take advantage of it.	0.938
ESE6	When you badly need a single/album, how confident are you not to use an illegal copy of it.	0.924
Willingness to pay ( $\alpha = 0.968$ ; $CR:0.979$ ; $AVE:0.940$ )		
WTP1	I intend to use fee-based online music in the near future	0.959
WTP2	I am willing to pay for the fee-based online music in the near future	0.970
WTP3	I will use the fee-based online music in the near future	0.979

Table 3: Variable characteristics and correlation matrix

Construct	Mean	Std. dev.	M3	M4	Construct											
					EO	VA	PC	PR	FM	II	EI	CO	ESE	AB	WTP	
Expected Outcome	5.67	0.82	0-.67	0.64	0.76											
Value added	5.73	0.78	-0.73	0.51	0.77	0.73										
Perceived cost	4.95	1.11	-0.34	0.51	-0.05	-0.11	0.85									
Perceived risk	5.16	0.99	-0.37	0.13	0.03	0.03	0.40	0.86								
Free mentality	4.93	1.46	-0.35	-0.58	0.06	0.01	0.49	0.20	0.94							
Interpersonal influence	4.06	1.23	-0.34	0.23	0.29	0.20	-0.23	-0.04	-0.16	0.92						
External influence	4.75	1.04	-0.51	0.72	0.26	0.30	0.01	-0.02	0.00	0.44	0.77					
Controllability	4.65	1.13	-0.61	0.69	0.32	0.30	-0.33	-0.14	-0.17	0.45	0.36	0.80				
Ethic self-efficacy	3.97	1.29	-0.17	-0.20	0.13	0.12	-0.08	-0.01	-0.03	0.20	0.11	0.17	0.81			
Attitude toward behavior	4.92	1.09	-0.70	1.18	0.30	0.32	-0.31	-0.14	-0.40	0.33	0.41	0.34	0.07	0.91		
Willingness to pay	3.77	1.44	-0.10	-0.43	0.27	0.26	-0.29	-0.16	-0.30	0.46	0.32	0.42	0.20	0.43	0.97	

\*Diagonal elements are the square root of AVE. These values would exceed the inter-construct correlations for adequate discriminant validity; M3: Skewness; M4: Kurtosis

### 3.4. Hypothesis Testing

It is noticeable that several constructs are formative second-order style, and some variables, such as free mentality, are new and their measurements are self-developed. Therefore PLS was selected to test the proposed hypotheses since it can deal with formative constructs and is preferred when the research purpose leans toward theory building. The results of direct effect analysis are described in Table 4. After controlling the effect of age ( $C_1$ ), gender ( $C_2$ ), and the most frequent visited music websites (by using four dummy variables:  $C_{3,6}$ )<sup>1</sup>, subjective norm,

<sup>1</sup> It is likely that users of specific websites are more willing to pay for the content than are users of other websites. To exclude this effect, respondents were asked to select the most frequently visited websites from a list containing four popular online websites. Since this is nominal-style data, we used four dummy variables to represent these websites.

attitude toward paying, and perceived behavioral control have positive impacts on willingness to pay. These variables explain a total of 30.5% of the variance of willingness to pay. Therefore, Hypotheses 1, 2 and 3 are supported. For the relationships between attitude toward paying and its antecedents: perceived benefit (1) is positively associated with attitude, while free mentality (2) and perceived sacrifice (3) are negatively associated with attitude. This indicates that Hypotheses 4, 5 and 6 are also supported. A total of 25.6% of the variance is explained by these three factors. Two interaction variables were created to test the moderating effects. We standardized the original score before multiplying paired items to avoid collinearity. While free mentality moderates the effect of perceived sacrifices on attitude toward paying, the interaction between perceived benefits and free mentality is found to be insignificant. Therefore, H8 is supported but H7 is not.

For Hypothesis 8, in addition to the significance of the coefficient, the  $R^2$  difference was used to test the significance level of the interaction term [Carte and Russell 2003]. The interaction between perceived sacrifice and free mentality is significant (at  $p < 0.05$ ) and the R-square difference shows the same result ( $R^2$  difference is 0.04). Furthermore, the negative coefficient represents the negative impact of FM\*PS on attitude toward paying.

Table 4. Path coefficients

Independent variables	Dependent variables	
	Willingness to pay	Attitude toward paying
Age	0.01	
Gender	0.03	
Website1	0.11	
Website2	0.02	
Website3	0.08	
Website4	0.11	
Subjective norm	0.16**	
Perceived behavioral control	0.28*	
Attitude toward paying	0.26**	
Perceived benefit		0.30**
Perceived costs		-0.11**
Free mentality		-0.29**
PB*FM		0.10
PC*FM		-0.18**
$R^2$	0.305	0.296

\*:  $p < 0.05$ ; \*\*:  $p < 0.01$

We also tested the mediating effect of attitude on the relationships between willingness to pay and the following constructs: perceived benefits, perceived sacrifice and free mentality. We followed the approach proposed by Baron and Kenny [1986] to test the mediating effect of attitude. First, all three variables were found to have significant impacts on willingness to pay (free mentality:  $\beta = -0.23$ ,  $p < 0.01$ ; perceived benefits:  $\beta = 0.14$ ,  $p < 0.01$ ; perceived sacrifice:  $\beta = -0.12$ ,  $p < 0.05$ ). Second, these three independent variables are significantly correlated with attitude. Third, the effects of these three independent variables on willingness to pay are reduced after the effect of attitude is considered. While the effect of free mentality remains strong, the effects of perceived benefits and perceived sacrifice become insignificant (free mentality:  $\beta = -0.18$ ,  $p < 0.01$ ; perceived benefits:  $\beta = 0.11$ ,  $p > 0.05$ ; perceived sacrifice:  $\beta = -0.10$ ,  $p > 0.05$ ). Therefore, we suggest that attitude partially mediates the effect of free mentality and fully mediates the effect of perceived benefits and sacrifice on willingness to pay.

#### 4. Discussion

As we expected, willingness to pay for online service is a function of perceived behavioral control, subjective norm, and attitude toward paying. These three constructs together explain almost 30 % of the variance of willingness to pay. Among these three constructs, attitude and subjective norm have a similar and relatively high magnitude impact on willingness, the magnitude of which is relatively high compared to that of perceived behavioral control. Subjective norm also plays an important role in predicting an individual's intention to pay for fee-based online music services. This matches the report by IFFI [2009]. In this study, different from past TPB-based studies which focused largely on influence from people important to the subjects, we incorporate influences from mass media, government and experts. This type of influence is as important as traditional subjective norm, having similar weight. In many countries, the government or the record industry cooperates with different media to push publicity

campaigns about listening to copyrighted music. They also disseminate the concept of copyrights through educational institutions and parents. Those approaches lead to a decrease in the downloading of illegal music. The positive impact of perceived behavioral control indicates that paying intention is increased when the belief that downloading unauthorized music is illegal is reinforced, when the price is affordable and when the website is relatively easy to use. For perceived behavioral control, we also included a barely-explored concept named ethical self-efficacy. Furthermore, we found that the importance of ethical self-efficacy suppresses traditional controllability, depending upon whether or not the price is affordable. This highlights the importance of building ethical self-efficacy.

Similar to past research and consistent with theory, attitude toward paying is an important indicator for predicting an individual's intention to pay for fee-based online music services [Chu and Lu 2007]. Our results also show that three constructs (i.e., perceived benefit, perceived sacrifice and free mentality) significantly influence an individual's attitude toward paying. Not surprisingly, we found that perceived benefit has a positive impact on attitude toward paying, and that perceived sacrifice has a negative impact. This indicates that people increase their volition to pay when the perceived benefit increases, and reduce their volition when a high level of sacrifice is found. Furthermore, the relatively higher coefficient of perceived benefit (compared with perceived sacrifice) indicates that perceived benefit plays a more important role in forming attitudes.

In addition, the influence of free mentality on one's attitude toward paying is significant and important. The standardized coefficients indicated that free mentality is as important as perceived benefit, but in the opposite direction. This indicates the need for service providers to highlight the benefits of their service to counter the effects of free mentality. A significant and strong negative coefficient indicates that people are less likely to pay if they possess a high level of free mentality. In addition, although both free mentality and perceived sacrifice have a negative impact on attitude, the impact of perceived sacrifice is relatively minor. This result suggests that practitioners should pay more attention to dealing with free mentality first. The concept of free mentality has been built since the Internet began to rise in popularity. Internet users can get a great amount of copyrighted, unauthorized information and other resources through social network swapping or sharing. Although the free mentality concept has been discussed conceptually, this study serves as a pioneer to explore its influence.

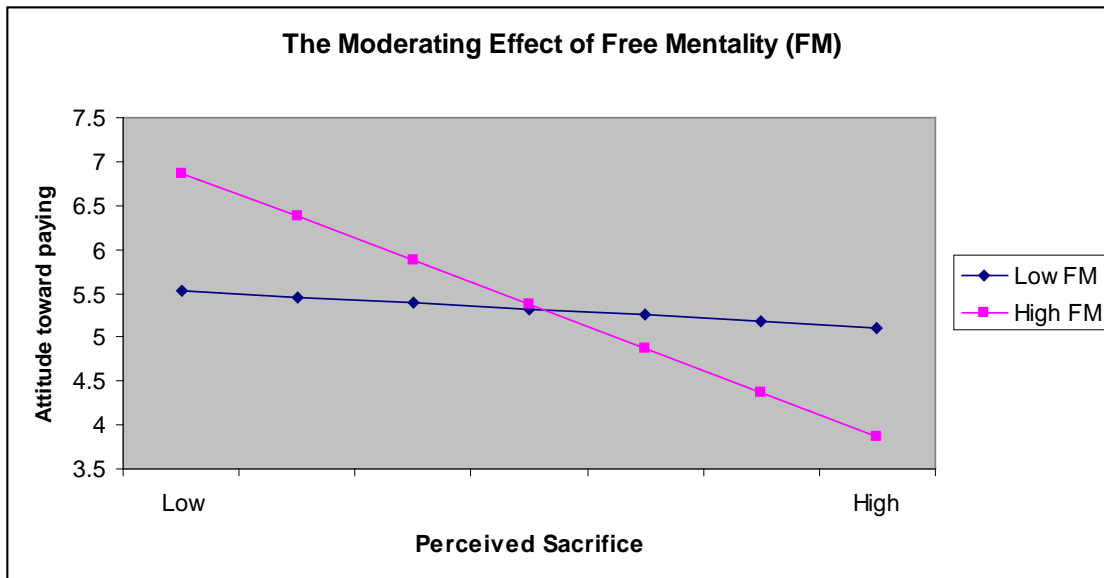


Figure 2: The moderating effect of free mentality on the relationship between perceived sacrifice and attitude toward paying

#### 4.1. The Moderating Role of Free Mentality

Free mentality shows its effects not only on attitude toward paying directly but also on the relationship between attitude and perceived sacrifice. Perceived sacrifice represents the direct cost or potential risk incurred by customers during the consumption process. As shown in Table 4, the negative coefficient of the main effect represents that attitude toward paying decreases as the level of perceived sacrifice increases. Figure 2 further illustrates the relationship between perceived sacrifice and attitude toward paying under different levels of free mentality. It is

noticeable that, *first*, after the subjects are separated into two groups, different levels of slope indicate that perceived sacrifice has a strong impact on attitude for those with high free mentality, more than for those with low free mentality. This represents that people who believe that music on the Internet should be free for use are much more sensitive to perceived sacrifice. In contrast, people with low FM tend to maintain their attitude toward paying at a similar level even when the level of perceived sacrifice is high. This implies that people with low FM tend to believe that sacrifice is necessary to receive appropriate services.

*Second*, when the perceived sacrifice is low, people with high free mentality possess a more positive attitude toward paying for online services than those with low free mentality. This difference decreases gradually as the perceived sacrifice increases and disappears when the perceived sacrifice is at the middle level. However, when perceived sacrifice is high, attitude toward paying is more positive for people with low free mentality than it is for those with high free mentality. The interpretation for the above observation is that people with high FM are sensitive toward sacrifice and are more willing to pay when the sacrifice is small.

However, different from our expectation, the moderating effect of free mentality on the relationship between perceived benefit and attitude is not supported. The strong main effect of perceived benefit and the weak interaction effect indicates that, *first*, people possess a more positive attitude toward paying for online service when the perceived benefit is higher and, *second*, this trend applies to both high and low free mentality individuals. We can reasonably conclude that free mentality generates no effect on the relationship between perceived benefit and attitude. As long as customers confirm the benefits provided, their attitude toward paying tends to be positive.

## 5. Conclusion

Although a high proportion of the population uses the Internet for information and communication, online content providers still struggle with the question of how to manage their product in a more profitable way. Even though different payment models have been proposed by researchers, it is still very difficult to overcome the “content for free” mentality and to introduce paid content models to the Internet [Thies and Albers 2010]. To understand the impact of free mentality, based on decomposed TPB, this study proposed a model to understand people’s willingness to pay for online content. In alignment with the literature, we hypothesized that attitude, subjective norm, and perceived behavioral control have direct impact on willingness to pay. Furthermore, in order to understand the broadly accepted norm that everything on the Internet should be free, this study also incorporated free mentality into the research design. We hypothesized its direct impact on attitude and its moderating effect on the relationship between attitude and its two antecedents. After collecting data from 268 online music users, the results confirmed most of our hypotheses. Several important implications for academics and practitioners can be obtained from the above results.

### 5.1. Implications to Academics

This study examined and explored the role of free mentality on the forming of willingness to pay for fee-based online content. The results showed that attitude toward paying for online music services is affected by perceived benefit, perceived sacrifice, free mentality, and the interaction between them. We believe that, by revealing the role of free mentality in determining the attitude toward paying, the results of this study generate important insights for further research into understanding customers’ intentions regarding paying for online music services. First, the negative effect of free mentality on attitude was confirmed. This pervasive norm drives people to view paying as not necessary and weakens people’s attitude toward paying. Therefore, future studies on intention to pay should not exclude free mentality from their research models. Second, different from past studies which simply showed the impact of FM on willingness to pay [Dou 2004], this study moved one more step by exploring the moderating role of FM. We found that free mentality moderates the relationship between perceived sacrifice and attitude toward paying. However, in addition to the above implications, this study also raises some research questions through affirming the role of free mentality. For example, free mentality may be affected by many variables, such as the level of income. People with high income are more likely to pay for online content because searching for free content is not without cost. More importantly, one question of interest is whether free mentality can be changed or reformed. Therefore future research may explore the antecedents of free mentality or ways to reduce it. This is critical for both academia and practitioners. Another question that needs to be answered is: “when does free mentality generate a greater effect?” We hypothesized and found that free mentality moderates the relationship between perceived sacrifice and attitude. However, one can also argue that the effect of free mentality on attitude is contingent on the level of perceived sacrifice. This statement implies that free mentality may generate a stronger effect under certain conditions (e.g., for a specific product or service). Future research is encouraged to explore potential contingent factors.

For TPB research, this study provides another piece of empirical evidence for applying TPB in the context of online consumption. We developed a theoretical framework for paying for online music services and tested it with

empirical data collected from Internet users. Given that past studies focused largely on usage intention, this is one of the few studies focused on examining users' intention toward paying for online services. In addition, previous studies which focused on willingness to pay for online music focused either on attitude alone, or adopted a general TPB model which contains attitude, subjective norm, and perceived behavioral control (three variables only). We contribute to this research stream by introducing a more comprehensive model and exploring the content of each variable. Our results show that willingness to pay for online music service is a function of attitude toward paying, subjective norm (formed by interpersonal influence and external influence), and perceived behavioral control (formed by ethical self-efficacy and controllability). Furthermore, attitude toward paying is a function of perceived benefits, sacrifices, free mentality, and the interactions between them.

Different from past studies which focused on ease of use or usefulness, we argued and confirmed that, for fee paying services, there is a need to consider perceived benefits, perceived sacrifices, and the effect of free mentality. Kim et al., [2007] proposed that there is a need to take sacrifices into consideration (in addition to positive benefits) when attempting to understand the antecedents of the adoption of a fee-based service or product. We adopted this concept in understanding the effect of perceived benefits and sacrifices on attitude. Furthermore, in addition to the direct effects of benefits and sacrifices, we also demonstrated that the forming of attitude is also contingent on free mentality.

Similar to usefulness, perceived benefits serve as a positive outcome of using a service. A strong and positive coefficient indicates that perceived benefits play an important role in determining the attitude toward paying. This also confirmed past studies showing that attitude is largely contingent on the positive outcome to be obtained through adoption. Perceived benefit is treated as a formative construct which contains various dimensions. This study, based on the research context, includes two major types of benefits: expected outcome, and value added. Future research may further explore possible benefits for other types of online service. On the other hand, perceived sacrifices serve as another driver toward the opposite direction. A significant coefficient also confirmed our hypothesis that attitude toward paying is lower when perceived sacrifice is strong. Given that many online services are attempting to charge their users, future studies in this research stream have to take perceived sacrifices into consideration while studying user intent. Similar to perceived benefit, this study treats perceived sacrifice as a formative second-order construct which contains two types of sacrifices: perceived cost and risk. Future research should modify the content to truly reflect perceived sacrifice in different contexts.

This study also incorporates the concept of "ethical self-efficacy" as part of perceived behavioral control. Our study is one of the few to have examined the impact of ethical self-efficacy since this concept was first proposed by Kuo and Hsu [2001]. The positive impact of ethical self-efficacy on willingness to pay implies that it is more possible for people to pay when they possess a certain level of ethical self-efficacy. This result highlights the importance of exploring possible ways to enhance ethical self-efficacy, given that it is easy to perform pirating behaviors today.

## 5.2. Implications to Practitioners

The concept of "everything on the Internet should be free" has been rooted in people's minds since their first access to free information. It will be a great challenge to alter this mentality and make people pay for online services [Ye et al. 2004]. The analysis results of our study also confirmed this idea that by generating a negative impact on attitude, free mentality does reduce people's willingness to pay for online content. However, this is not unchangeable. The strong and significant impact of perceived benefits suggests that online service providers should maximize the level of benefits to suppress the impact of free mentality and attract users. For example, service providers should pay attention to cultivating an online community. The sense of community is powerful when people are affectively attached to the group. Being afraid of losing their connection with virtual friends drives people to pay for the online services. Another approach is to provide useful special features, such as allowing users to organize the content and to receive some important information (e.g., Billboard magazine music ranking). Those value added features serve as the glue which keeps current customers, or the magnet which attracts new customers.

Perceived sacrifice has a negative impact on attitude. However, this effect is stronger for people with high free mentality. This implies that content providers should try to reduce direct costs or remove possible risks in order to attract people with high FM. However, when a minimum cost or risk is unavoidable, benefits should be the focus because of its strong impact on attitude.

Lastly, perceived behavioral control and subjective norm have positive impacts on willingness to pay. Online service providers may form a union to push the government to enhance ethics education and increase the conveyance of the "user pays" concept. Price determination is critical as well since people tend to pay for the online service if this is a generally accepted concept.

## 5.3. Limitations and Future Research

This study is not without limitations. First, although, the concept of free mentality has an important impact on willingness to pay for online music services, there are still some other potentially influencing factors not included in our model. Broader and deeper investigation is required to completely figure out the components that generate resistance to paying for online music services. Second, people who attempt to generalize the results of this study in other contexts should be careful. Since most of our respondents were young people who grew up with the Internet, data from older people may be required to provide a comprehensive view. Furthermore, online music is one of the few industries that are able to keep their customers after starting to charge money. There is a need to examine the proposed model under conditions including different online services. Third, a total of 30.5% of the variance of willingness to pay is explained by the proposed antecedents. This implies that some important drivers of willingness to pay are not included in our research model. For example, past online shopping experiences, with online music especially, should be included since individuals with experience of having paid in the past are more likely to pay in the future. In addition, paying intention may be lower when free versions or substitutes are available and can be accessed easily. Future research is encouraged to extend our study by identifying other critical variables. Lastly, caution should be paid while attempting to generalize the result since a significant portion of our sample is young people with less income. Researchers are encouraged to verify our result with samples of various age and income levels.

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