

The intention to download music files in a P2P environment: Consumption value, fashion, and ethical decision perspectives[☆]

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Abstract

Downloading unauthorized music file, being framed as a problem of crime, is deemed unethical, but the peer-to-peer systems have boosted its popularity and have become the killer application for the music industry. Two factors, cost savings from CD purchase and the low moral reasoning ability of Internet users, have been frequently attributed as rationales for this behavior. Music download, however, can also be interpreted as a value maximizing behavior that chooses between the values from consuming illicit and legitimate music, wherein the consumption value is partly dependent on one's degree of fashion involvement since music is fashionable. This paper presents a conceptual model of music download by looking at and integrating these seldom noticed perspectives with traditional explanations. An analysis of 834 samples drew from a survey of P2P users in Taiwan reveals that: people are maximizing value while downloading music; and that fashion involvement influences the perception of consumption value from music download. This study also found that moral reasoning moderate the relationships among fashion involvement, consumption value, and behavioral intention to download music.

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Keywords: Peer-to-peer; Music download; Behavioral intention; Fashion; Moral reasoning; Consumption value

1. Introduction

Digitalized music files, retaining almost the same quality as the original, can be reproduced, stored, and transferred at almost zero-cost. The technology of peer-to-peer (P2P) architecture has brought great convenience to and fostered the popularity of illegal downloading of “free” music. P2P architecture provides a platform for people to share resources with others. Many individuals, enabled by this technology, would rather download music from unknown members of P2P platform, than buying CD or music files from legitimate sellers. This is quite detrimental to the music industry [29]. Understanding why or how an inten-

tion to download develops becomes one of the critical issues for music companies. More empirical studies, therefore, are needed to investigate the antecedents of users' behavioral intention to download music files in the P2P environment [1,13,19].

User's unauthorized downloading of music files is an invasion of intellectual property. Traditionally, consumers' economic savings and moral judgment are two explanations, among others, for downloading illegal music files. Monetary or economic gains such as cost saving, low price, or low income of customers was frequently suggested as one possible antecedents of this illegal behavior [13,26,44]. The proposition of saving money on music purchasing, however, is found not a primary antecedent of downloading free, so-called pirate music [32], and may be present only for “unknown” new songs wherein individuals with low income sample new music [2].

Some researchers assumed that music download is not only illegal, but also immoral. A decision to act, hence,

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partly depends on an individual's ethical framework to judge the degree of morally rightness of this behavior [34,31,13]. Kohlberg's Model of Cognitive Moral Development (CMD) describes one's developmental status in a continuum of moral reasoning ability to judge morally right or wrong regarding an act in a situation of moral conflict. Previous studies have consistently found a direct relationship between higher level of moral judgment and ethical behavior [43,55,23,12,35,39]. One possible explanation of the popularity of music download, hence, is the low level of moral development of Internet users [34]. But conflict results have also been found [23]; music download even may not be perceived as an unethical behavior at all [46].

Downloading of music files can be viewed as a kind of music consumption [19]. One of the primary purposes for music download is to enjoy the "free" pirate music. P2P in such context is an alternative channel for having music. Downloaders can be viewed as consumers of music who are maximizing value from the trade-offs between illegal and legal channels. Consumers are always rational to some certain extent when choosing among alternative channels. Though higher CD price would increase the pay-off from music piracy, hence encourage music download [13], consumption value is a multi-dimensional concept including but not limited to economic gains [62,47,50].

Music is fashionable and always conveys features of social utility that satisfy interpersonal needs. The popularization of music presents a typical phenomenon of fashion [42,51]. Fashion is the process of adopting symbols primarily to provide the individual an identity relative to others [42]. People highly involved with fashion may perceive music with higher value from its social utility. The need of pursuing fashion may affect personal behavior greatly. People, especially the young generation in poor financial status, may thus be inclined to download music.

Despite an extensive amount of research examining the influences of economic gains and cognitive moral development, researchers have not fully explored this issue in the context of music consumption. This paper fills in the gap by proposing an integrative model for interrelating various theories that views music download as an ethical issue, a mean to music consumption, and music is fashionable. Standing on the above assumptions, the objective of this study is to provide insight into the decision process of music downloaders by integrating traditional approaches with the new perspectives. More specifically, the objectives of this study are to compare the effects of consumption value, moral reasoning, and fashion involvement, and to explore their relationships.

2. Theoretical background

2.1. Music downloading and moral concepts

Since music files is somewhat similar with software in its nature [2,13], previous ethical models regarding softlifting can be extended and refined to enhance our understanding

of the contributing factors of music files downloading. Previous studies about softlifting found that legal factors were not the determining variables for softlifting [40,9,48]. But since music download is illegal, a decision to act invokes in an individual's ethical dilemmas. An ethical dilemma occurs when there is a moral conflict, creating a situation where right or wrong is hard to evaluate and decide.

Kohlberg's theory of cognitive moral development, emanating from field of cognitive development, explains the processes individuals go through to arrive at decision prior to moral behavior [30]. Kohlberg [28] argued that, during the process of moral judgment, three levels of moral reasoning, with two stages within each level, would be applied. He believes that an individual, while growing up, will sequentially and unidirectionally proceed through three levels of moral reasoning.

The focus of level one, "pre-conventional level," is on the self. Moral reasoning on this level is predominantly based on maximization of personal gains and minimization of personal loss. Younger children obey rules to avoid punishments or obtain rewards. At stage 1, a person do what was told; then, at stage 2, people begin to learn that "doing good" is doing what is good for me, rather than doing what others demand. One may make a bargain with others for cooperation [30,39].

The focus of level two is on the relationships with other groups. Children and teenagers in conventional level conform themselves to rules to avoid disapproval or dislike from others, or censure by legitimate authorities and resultant guilt. They become eager for the recognition from peers and hence produce a sense of conformity, strictly adhere to law imposed externally. Reasoning at stage 3 involves the making and sustaining relationships with friends and loved ones, and produces a sense of mutual caring; and reasoning at stage 4 provides guidelines for cooperating with remote others, such as strangers, competitors, and enemies [30].

Stage 5 and 6 comprised the third level of moral development. The focus of this level is on personally held principles [30]. The third level signifies a more principled reasoning reflecting a growing autonomy based on self chosen principles [39]. Adults in post-conventional level conform themselves to rules to avoid self-condemnation, and maintain the respect of impartial spectator judging in terms of community welfare. Prior to social attachment, an individual at stage 5 will be aware of universal values and rights that anyone could choose to build a moral world [39]. Individual reasoning at stage 6 makes a choice to do what is right if it is consistent with self chosen principles [30].

An individual's cognitive moral ability increases as cognitive moral structure of greater sophistication is added [11]. The higher the moral reasoning ability is, the more likely it is that a person will consider alternatives that are least detrimental to others that are affected [59]. As one advance along the ethical development continuum, this person will be less influenced by dysfunctional events in

pursuing the course of action to a moral conflict situation [57]. A person will, hence, behave much more morally as this person utilizes advanced moral reasoning ability [57,3,55,43,30]. Negative evidence, however, had also been found [34]. Situational constraints or personal preference of consequences from specific alternative may influence ethical judgments to induce behavior different from moral intention.

2.2. Consumption value

Consumption value is the degree of fulfillment of consumers' need by the consumption behavior and operationalized as consumer's overall assessment of the net utility of a product after weighing the "gains" and the "gives" [62]. The consumption value of music is operationalized as consumers' surplus in terms of the difference between gross utility and price of music CD ($u-p$) in case of buying, and the difference between utility and cost of downloading ($u-c$) in case of pirating. It is considered a pivotal determinant of shopping behavior and product choice [62].

People acquire and appreciate music mainly for reasons of enjoying playfulness, collecting music, killing time and relieving feelings and pressure, gaining recognition among and interacting with peers, etc. P2P platform can be viewed as an alternative channel for music consumption. The conditions that an individual will download music is value of music download is positive ($u_{\text{download}} - c > 0$) and larger than that of buying CDs ($u_{\text{download}} - c > u_{\text{CD}} - p$) [7]. If u_{download} equals u_{CD} , then the latter condition can be reduced to $c < p$. Since c is undoubtedly lower than p , $u_{\text{download}} > c$ (a positive value from music download) will become a critical condition to download music. Assuming consumers are value maximizers, then the higher the value of music download is, the stronger the intention to download will be; and in most cases, since c is very small, music files will substitute CDs.

Music download, however, may not always be substitute for music CDs. Empirical evidence reveals that Internet users consume music CD and P2P music at the same time; and there is a strong heterogeneity in the relationship between these two types of consumption behavior. Some users had a strong consumption of CD but a weak consumption of P2P music; and vice versa [44]. Apparently, consumers still choose music CDs in certain conditions.

We can infer from the above evidence that an individual may not always perceive a higher value from music files. The relationship between values of music download and CDs is also dependent on their utilities. The utility of music always varies from people to people. Music is sold for hedonic purposes. Customers care more about its experiential value derived from perceptions such as playfulness, aesthetic, etc. Furthermore, value is a personal and subjective concept including some intrinsic needs such as emotional and/or epistemic pay-off. People may implicitly include factors such as prestige into the "get" component [62]. For example, people may like to enjoy the prestige, pride, and

playfulness from finding rare music and/or gaining knowledge of music at the price of worst acoustic quality. Having assortment of music, experiencing new music, and receiving help from other members of P2P community, have been suggested to be rationales for music download [44]. On the other hand, some prestige such as privilege to attend the fans' club may only be given if one buys CD album.

The relationship between values of downloading music and buying CD thus may become complicated and intricate. One will not choose music files if its consumption value is inferior to music CDs, even they have positive and lofty value; and vice versa. Hence, it is reasonable to assert that the higher the difference between values of music files and CD, the higher an individual's propensity to download music.

2.3. Fashion

Phenomenon of fashion appears and is fanatical in many areas of life, including music, as the results of social influences [8,37]. Social influences from peers have been found to induce unethical behavior [25,56]. Sproules [51] defined fashion as "a way of behaving that is temporarily adopted by a discernible proportion of members of a social group because that chosen behavior is perceived to be socially appropriate for the time and situation". People naturally tend to form groups and adopt the symbols of the esteemed groups to provide an identity relative to others [38,42]. In a certain period, an object conveying meaning for social identity diffused through a group and adopted by members of that group will gradually become socially appropriate for that period.

McKintyre and Miller [37] found that, for products conveying social utility featuring benefits that satisfy interpersonal needs such as conformity, fashion is a prime antecedent of customers' preferences of such products. Prior to social interaction, preferences of products may be weak or nonexistent [38]. The preferences of products are, in part, influenced by the social identity statement resides in a products owned by an individual's referenced peers. Peers set standards and serve as reference for behavior; people learn behavior from association of group [25]. An individual, especially the teenager, conforms himself to those standards to avoid disapproval or dislike from others [28].

People who highly involve with fashion are very easy to carry out herding behavior [14,10,49]. Many people have a desire to be perceived as up-to-date, hence are more apt to adopt and infuse into the latest trends in the society. Individuals with strong desire to be stylish may tend to check trends adopted by others more frequently, thus may have higher possibility to be influenced by peers [38]. They easily tend to refrain or even neglect his personal feelings and obey the sharing meaning in which arises the herding behavior in the group.

Music download and consumption are very popular among and viewed by many people as a symbol of "wired

lifestyle [4].” A serious of survey conducted by MIC, Institute for Information Industry¹ in 2005 indicated that near 60% of Internet users in Taiwan took on-line music as their first priority entertainment activity. This figure increases to 79% for people under 25 years old. Compared to other on-line entertainment activities, on-line music was ranked top for every segment of Internet users. Only about one third of the informants, however, were willing to pay for the on-line music service [33,21].

Music download possesses some important features of fashion. For example, carrying and playing music with mp3 player may symbolize an identity belonging to certain groups; and may be viewed as up-to-date and stylish. Music download can help one to share and communicate music related stuffs to avoid disapproval or dislike from others. Music download can also help an individual adopt and infusing into the latest trends of music.

Hence, most of the Internet users in Taiwan zealously participated in on-line music downloading, especially for free but illegal music files. We therefore assumed that music downloading and consumption are socially appropriate and fashionable behaviors, especially among young generations, and used the fashion involvement, the extent to which one’s behavior is affected by the fashion trend, to conceptualize the effects of social influence.

3. Research method

3.1. Research model and hypothesis

We assumed downloading music in the P2P network to be intentional and involve the decision making of moral dilemmas. Following the arguments of Conner and Rumelt [7], this study assumed that music CDs and music files are substitutes for each other while people making a decision to download music. People, hence, will consider the value of music files, and compare the difference of values between these two alternatives. Fig. 1 depicts the research model of this study. It discloses the role of fashion, value, differences of value, and moral reasoning ability in shaping the behavioral intention to download music files.

Downloading music files is a new means of music consumption. If it can bring forth worthy value, users might probably choose the new means to acquire music. Except for enjoying music, downloading music may bring users utilities such as convenience and time saving, and decrease the cost of acquiring music greatly. The greater the value is perceived, the stronger the downloading intention should be. Hence, we proposed that:

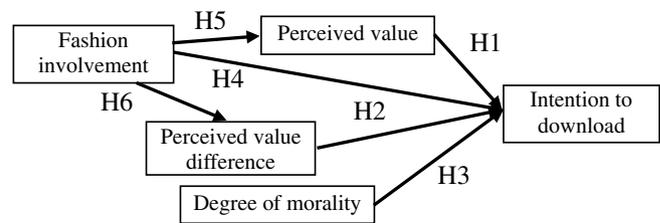


Fig. 1. Research model of the study.

H1. *The perceived value of music downloading is positively related to the behavioral intention to download.*

Practically, buying CDs may bring utilities other than enjoying the music such as the privileges to attend fans’ club, and may not suffer costs from downloading music such as penalties if caught. Taking into account the “gains” and “gives” of these two different approaches for music consumption, the value of CDs may be, and may not be better than downloaded music. For people with high rationality, the intention to download may be low if value of downloading is not higher than that of buying CDs, even if the former is lofty. Hence, we propose that:

H2. *The perceived differences of value between music downloading and buying CDs are positively related to the behavioral intention to download.*

Unauthorized downloading of music files has been framed by some researchers as a problem of consumers’ ethics [34,31,13,46]. An individual with advanced moral reasoning ability will relatively commit more importance to principled reasoning in making a decision about moral dilemmas, hence may view music downloading as more unethical than those who were not. Many previous studies found a direct relationship between higher moral reasoning and higher incidents of ethical behavior [3,9,55]. Hence, we propose that:

H3. *The subject’s moral reasoning ability is negatively related to the behavioral intention to download.*

Because of the extensive advertising and reports in the mass media, playing mp3 music may now be seen as a symbol of the new life style and a socially appropriate behavior among some groups of users. People who highly involve with fashion carry out herding behavior more easily [14,10,49], and may tend to check trends adopted by others more frequently. Thus, they may have higher possibility to be influenced by their peers [38]. These people, therefore, may blindly pursue trends of fashion or unconsciously present herding behavior to download music without evaluating the consumption value. Hence, we propose that:

H4. *The degree of fashion involvement is positively related to the behavioral intention to download.*

Utilities other than appreciation of music can be found from downloading music files. For example, abundant information provided by P2P systems regarding fashions of music may help a person keep in trends; abundant collection of music may help a person communicate with and conform to peers more easily; and P2P provides an easier, faster, and cheaper way of collecting music, especially

¹ Institute for Information Industry (III) is a government sponsored not-for-profit organization aiming at facilitating and promoting the Information Industry by Taiwan. Marketing Intelligence Center is a department of III, which is responsible for surveying and studying the status and trends of the market of Information industry in Taiwan and the globe, to give advices to the government and the industry. Their reports were widely accepted by Taiwan’s industries.

for marvelous, rarely found music such as vanished historic recording. Except for the utilitarian value, the symbolic meaning attached to music provides more utility to people [38]. These utilities may raise the value of downloading music to increase the value difference. However, these utilities may be meaningful only when people are highly involved with fashion, and vice versa. Hence, we propose that:

H5: *The degree of fashion involvement is positively related to the perceived value of music downloading.*

H6: *The degree of fashion involvement is positively related to the perceived difference of value between music downloading and buying CDs.*

3.2. Measures

To ensure content validity, items selected for the constructs, shown in Appendix, were primarily revised from prior studies for the context of music downloading. At the time of data collection, there is not any P2P platform that provides legal music download services in Taiwan. The music companies just started a prosecution against a few of the P2P platforms. Users willing to download music legally from Napster or iTunes are very scarce [33,21]. Hence, the survey items indicate music download as an illegal conduct. All the constructs, except for the demographic variables of the subjects, value difference and the moral reasoning ability, were measured on a five-point Likert-type scale.

The *Moral reasoning ability* measures the subjects' developmental status located in a continuum of morality. This construct is derived from Kohlberg's model of cognitive moral development, which has been widely used in research into ethical behavior. Different measurement scales for this construct such as defining issues test (DIT), moral judgment test (MJT) have been developed [23]. Defining issues test (DIT) was used since it is widely used, simple, reliable, and has been validated [12,30]. DIT presents six stories and each story contains 12 issues regarding a hypothetical dilemma for the subject to rate their degree of importance. Each of these issues represents prototypical statements endorsed by persons at different stages of moral development. After rating these issues, the subject has to rank four most important issues in determining each ethical judgment. An index, *P*-score, was computed according to the procedures in Rest [41], and used in analyses. *P*-score represents the subject's development of conceptual adequacy of moral thinking in terms of the relative importance this subject gives to principled reasoning in making a moral decision. A *P*-score larger than 50 indicates an individual is making moral judgment on the bases of principle moral reasoning [41].

At least three stories have to be used in an empirical study [41]. DIT is heavily dependant on subject's reading skills. Younger students may have not enough such skills. Problems may also be raised by the cultural difference between Taiwan and United States. One hundred and

two 7th–9th graders hence were invited, in a class period, to a pilot test to decide the best three stories set. Three DIT recommended stories of “Heinz and the drug,” “Escaped prisoner,” and “Newspaper” were used not only because they have the highest correlations of any 3-story set with the full story set, but also they are the most understandable among others.

Perceived value is defined as “the degree of fulfillment of consumers' need by downloading music”. *perceived value difference* is defined as “perceived difference between values acquired from downloading music files and from buying the original CDs”. Sheth et al. [47] proposed five dimensions of value, including functional value, social value, emotional value, epistemic value, and conditional value. The functional value is defined as “utility acquired from an alternative's capacity for functional, utilitarian, or physical performance.” The social value is defined as “utility acquired from an alternative's association with one or more specific social groups.” The emotional value is defined as “utility acquired from an alternative's capacity to arouse feeling or affective states.” The epistemic value is defined as “utility acquired from an alternative's capacity to arouse curiosity, provide novelty, and/or satisfy a desire for knowledge” [47]. The conditional value is defined as “enhancement of functional or social value due to the context of consuming an alternative.” Hence, it can be viewed as a specific case of other types of value that arises due to situational factors [53]. The situations for consuming music, however, are too many to deal with. This study, hence, the same as Williams and Souter [61] and Sweeney and Soutar [53], did not include the effects of conditional value. Items for these two constructs were, referring also to Conner and Rumelt [7], Simpson et al. [48] and Chien and Moutinho [6], designed by this study on the basis of [47]. Thirteen items were constructed. Seven-point semantic differential scale was used to measure the value difference.

Fashion involvement is defined as “subject's perception of the degree of personal relevance towards a fashionable object for pursuing novelty and following his/her peers.” It is measured by six items drew from [38,45]. *Intention to download* is defined as “The subject's likelihood to download music in P2P systems.” It is measured by five items revised from the items measure the intention to softlift in Swinyard et al. [54] and Yogesh and Dennis [58]. Finally, demographic variables and P2P and Internet usage behavior were also collected as control variables.

To ensure the content validity, some graduated students and Internet users were asked to complete and review our questionnaire. The questionnaires were further refined and elaborated according to their opinions. One hundred and seventy-four respondents, ranging from 13 to 50 years old, were invited to participate in a pre-test. The revised questionnaires resulted in high reliability and validity except for the construct of value. Items v8–v13 were dropped out because of the result of an exploratory factor analysis indicated that either the factor loading of these items were less than 0.5, or they were loaded into other constructs.

3.3. Data collection

A survey research was conducted to test the research model. Stratified sampling method was employed to collect samples in different stage of moral development and to improve the external validity. Sample's distribution of age was chosen to be similar to that of the populations of Kuro, the biggest P2P community in Taiwan with over 500,000 members. In each of the stratifications, convenient sample was drawn. The data collection lasted for 2 weeks. Sample ranging from 12 to 18 years old was drawn from three junior high schools and two high schools located in Taipei. Sample above 19 years old mainly came from students of three universities and employees at many companies. For the students, the actual surveys were conducted during the class period in the classrooms. For non-student respondents, the authors left the questionnaire with them. A follow up telephone was dialed to them after the questionnaires were delivered. To ensure the quality of the responses, a short paragraph introduces the objectives of this study was written in the beginning of the questionnaire. The instructions of the survey were explained face to face to, and a gift was given to the respondents. Also, an oral briefing was conducted to explain the objectives of this study to the subjects.

3.4. Analysis of results and research findings

A sample of 1300 was drawn, and a total of 1239 surveys were returned, for a response rate of 95.31%. Incomplete questionnaires were first excluded. Sample were also excluded from further analysis if the subject did not specify the name of the P2P platform he/she used, or the subject download music from legal P2P platform. Totally, 132 questionnaires were excluded. According to Rest [41], the Consistency Check and the *M* score are two indicators of usability of a subject's *P*-score. If great inconsistency exists between a subject's rating and ranking of an item, or too little discrimination of the ratings of the items appears in a questionnaire, then the subject may take the test too seriously or misunderstand the instruction. *M* type items are grand sounding but meaningless items. A too high score in this scale represents that a subject, with improper mind of test taking, endorsed the statements for their pretentiousness rather than their meaning. 274 questionnaires did not pass the above two tests. This left 834 valid questionnaires.

Of the 834 samples, 444 (49.6%) respondents have utilized P2P within one year. The respondents appear to be light users of P2P in terms of frequency of usage, time spent per usage, and number of music downloaded per usage. Of the 444 samples, approximately 87% use P2P no more than once per day; 66% use P2P less than 3 hours per time; and 77% download less than 20 songs per usage.

3.5. Measurement model

The measurement scales of the primary variables in this study, including fashion involvement, value, and value dif-

ference, are immature. Past research has grappled with identifying a coherent set of value dimensions [50]; there are many ways to conceptualize and operationalize consumption value [16,62,47,17,18,36,61,53]. There is, however, little agreement as to the number and nature of these dimensions, and it was claimed to be context specific [50]. This study thus can only design the measurement scales by our own. Fashion involvement is a new concept; its measurement scales are very few and under development. Exploratory factor analysis and Cronbach's α were therefore used to evaluate and improve the reliability and validity of our measurement model. A principal components analysis with orthogonal rotation by varimax method was conducted. Eight factors with eigenvalues value larger than one were extracted and the factor structure is shown in Table 1.

All the items of fashion involvement and behavior intention were loaded in the predicted factor and their reliabilities equaled to 0.85, and 0.70, respectively. Items V1, V2, and V7 were dropped because those items were not loaded in predicted constructs (value). The reliabilities of value equaled to 0.79. The items regarding value difference were separated into five factors. Factor 8 was dropped because it had only one item after item V7 was dropped. The remaining four factors were, respectively, defined as difference of "functional value," "emotional value," "social value," and "epistemic value" because they conveyed meanings similar with the four value components proposed by Sheth et al. [47]. Item VD1 was deleted because its factor loading was lower than 0.5. VD3 were dropped because the difference between the largest and the second largest scores of factor loading was lower than 0.1. The reliabilities of the four factors left equaled to 0.57, 0.66, 0.73, and 0.80, respectively. Hence, only social value difference and epistemic value difference were kept for further analysis. The hypotheses involving the value difference were further decomposed into:

H2a: *The perceived differences of social value between music downloading and buying CDs are positively related to the behavioral intention to download.*

H2b: *The perceived differences of epistemic value between music downloading and buying CDs are positively related to the behavioral intention to download.*

H6a: *The degree of fashion involvement is positively related to the perceived difference of social value between music downloading and buying CDs.*

H6b: *The degree of fashion involvement is positively related to the perceived difference of epistemic value between music downloading and buying CDs.*

3.6. Descriptive statistics and correlations

Table 2 reports variable means, standard deviation and the Pearson correlations. None of the variables are correlated above 0.70, a threshold for multicollinearity problem [15]. The moral reasoning ability has a mean value of 31.33 (SD = 14.28), ranging from 3.33 to 80.0. In addition, the

Table 1
Factor structure of principal components of variables

	Component								Constructs	Results	Cronbach's α^b
	1	2	3	4	5	6	7	8			
FI1				0.60					Fashion involvement	FI1	.70
FI2				0.58						FI2	
FI3				0.78						FI3	
FI4				0.65						FI4	
FI5				0.67						FI5	
IN1	0.81								Intention	IN1	.85
IN2	0.80									IN2	
IN3	0.73									IN3	
IN4	0.79									IN4	
IN5	0.68									IN5	
V1 ^a	0.43										
V3			0.75						Value	V3	.79
V4			0.54							V4	
V5			0.76							V5	
V6			0.74							V6	
VD1 ^a					0.49				Functional value difference	VD2	.57
V2 ^a					0.60					VD11	
VD2					0.81						
VD11					0.63						
VD5							0.78		Social value difference	VD5	0.73
VD6							0.80			VD6	
V7 ^a								0.71			
VD7 ^a								0.71			
VD3 ^a		0.43					0.40		Epistemic value difference	VD8	
VD8		0.67								VD9	0.80
VD9		0.85								D10	
VD10		0.83									
VD4							0.58		Emotional value difference	VD4	0.66
VD12							0.64			VD12	
VD13							0.68			VD13	

Note: Suppress absolute values < 0.4.

^a Item was deleted.

^b The Cronbach's α of the measures composed of the selected items for the corresponding constructs.

Table 2
Descriptive statistics and Pearson correlations

Variables	Mean	SD	IN	FI	V	SVD	EVD	M
IN	3.516	0.754	1					
FI	3.415	0.624	0.243**	1				
V	3.20	0.77	0.31**	0.35**	1			
SVD	4.53	1.14	0.288**	0.049	0.281**	1		
EVD	5.16	1.26	0.268**	0.046	0.181**	0.316**	1	
M	31.32	14.28	0.033	0.037	0.034	0.043	0.040	1

Note: n = 834; Two-tailed tests of significance were used.

** p < 0.01.

mean value and standard deviation of the subjects with degree of high school, college/university, and graduate school is 32.08 (SD = 13.61), 31.3 (SD = 14.64), and 33.4 (SD = 14.67), respectively. This indicates that the moral reasoning ability of the subjects is quite homogeneous among different segments of the sample. Compared to the manual's data, it is only equivalent to that of high school students (31.8, SD = 13.5), and is significantly less than that of people with or above college degree (42.3 for college students; 53.3 for graduate students; and 40 for adults [41]. However, this finding is not unusual in business ethics research. Many studies have found relatively low mean

value, ranging from 30 to 40, and some studies even reported much lower scores [59,23,43,35]. Taking P-score value of 50 as a threshold to classify principled or non-principled individual [41], only 112 individuals (13.43%) in our sample are in post-conventional level of moral development. An examination of the correlations shows initial support to most of this study's hypotheses. Surprisingly, moral reasoning is not related with intention. This result may due to the low moral reasoning ability of the sample; subjects may perceive music download as not so unethical.

3.7. Hypotheses testing

The causal structural model was tested using Lisrel 8.7. However, the construct of moral reasoning ability has been measured with only one item. Following Kline [27], the variance of this latent variable's measurement error term is fixed to equal 0.20 times P-scores' observed variance; and the loading of P-score is fixed to 1. Maximum likelihood estimation was employed for model fitting. The goodness-of-fit indices indicates a moderate fit between the structural model and the data (Chi-square = 779.18; Chi-square/df = 4.8; GFI = 0.91; AGFI = 0.89; NFI = 0.91;

NNFI = 0.92; CFI = 0.93; RMR = 0.08). Table 3 illustrates the results of the structural model and the details of the statistics. The *t* statistics for path between moral reasoning ability and intention, and path between fashion involvement and SVD are not significant. The results indicate that the behavioral intention to download music is influenced by value and value difference; the latter two variables are influenced by fashion involvement; and fashion involvement also directly influences intention to download.

The findings indicate that moral reasoning ability may have no effects on music downloading. An examination of the sample indicated a potential moderating effect of this personal trait. Sample was divided at the median of *P* scores (30.0) into a high morality group (390 respondents) and a low morality group (444 respondents). Procedures suggested by Johnson [24] were followed to explore the moderating effects of moral reasoning ability. The results indicate that the structural relationship in the high morality group did differ from the low morality group, suggesting a moderating effect. The path coefficients in two groups were illustrated in Table 4. The effects of value and value difference on the intention to download are stronger for the low morality group, but the effects of fashion on value and value difference are stronger for the high morality group. In other words, low morality group might be more rationally concerning the value of music downloading, and be less influenced by the need of fashion; and high morality group are apt to download music for the needs of fashion.

Table 3
Results of the structural model and hypothesis tests

Hypothesis	Path coefficient	<i>t</i> Value	Support
H1: V → Download intention	0.20	3.40***	Yes
H2: VD → Download intention			Yes
H2a: SVD → Int	0.20	5.47***	Yes
H2b: EVD → Int	0.15	4.80***	Yes
H3: M → Download intention	0.00	0.06	No
H4: FI → Download intention	0.30	4.04***	Yes
H5: FI → V	0.52	8.20***	Yes
H6: FI → VD			Partially
H6a: FI → SVD	0.13	1.82	No
H6b: FI → EVD	0.20	2.37***	Yes

Note: ***Significant at 0.001.

Table 4
Path coefficients of high and low morality groups

Hypothesis	High	Low
H1: V → Download intention	0.32(3.55***)	0.43(6.07***)
H2: VD → Download intention	0.24(3.57***)	0.33(4.99***)
H3: M → Download intention	0.00(−0.45)	0.01(0.89)
H4: FI → Download intention	0.15(1.73)	0.03(0.42)
H5: FI → V	0.54(5.88***)	0.48(6.05***)
H6: FI → VD	0.22(2.95***)	0.17(2.42***)

Note: ***Significant at 0.001.

4. Conclusion and discussion

Downloading free music files from members of P2P platform is quite detrimental to the music industry. Music companies should understand that why and how consumers, confronting potential law suits, would download music files rather than buying CD albums or music files from legitimate sellers. Three primary findings may contribute to our knowledge regarding the behavioral intention to download music.

First of all, consistent with the argument of Conner and Rumelt [7], consumers are essentially value maximizers when choosing between buying and downloading music. A positive value from downloading music will facilitate music download (H1 is supported), and a comparison of the consumption value, specifically the social value and epistemic value, between the two ways for getting music positively influence users' behavioral intention (H2 is supported).

Secondly, music download may not be perceived as a problem of ethics. The moral reasoning ability is not related with the behavioral intention to download music files (H3 is rejected). Music download has been framed by some researches as a problem of ethics. However, findings of this study, coincided with Logsdon et al. [34], indicate that music download may be perceived not so unethical. Even individuals with higher moral reasoning ability download music for purpose of fashion. Some potential rationales for this result are proposed. First of all, resources in the P2P environment are deemed by many people as public goods to bring more welfare to the whole society [52,44]. Downloading music files, though illegal, therefore is probably deemed not so unethical under the ideology of freeware.

This result may also be attributable to the low degree of moral reasoning ability. Only 112 individuals (13.43%) in our sample are in post-conventional level of moral development. Most of the sample are at the conventional level of moral development, wherein one's peers and social circles significantly shaping his/her ethical belief [57]. Since ideology of freeware is so prevailing, therefore, many people, influenced by their peers who believe music files is freeware, may perceive music download as not so unethical.

Individual with ideology of consumer right, a belief in the basic requirements of consumers being satisfied in a fair transaction, might argue that invasion of intellectual property rights is a conclusion derived from extant market economy systems. Consumers should have the right to buy just the music they like, instead of buying a CD with unfavorable and/or ill produced songs. The big music companies today may have earned rent from their control of the distribution channel of music. Buying CD albums, under current market economy, actually deprives an individual of consumer's right. The ideology of anti-big company may induce an individual to pirate music [31]. Asian countries, confucian nations in particular, emphasize on social harmony and cooperation; ethical

norms of these countries stresses sharing with others what they create; people, hence, do not accept claims to intellectual property right by business firms [22]. P2P community, therefore, may be formed as an opposition to the music industry [44]. People downloading music files, therefore, is perhaps not unethical and/or lacking knowledge of law, rather, they may only hold a premise different with that of teleological theories of moral philosophy to chase a better value that cannot be offered in current market economy.

Thirdly, fashion involvement plays an important role in shaping an individual's intention to download. People who highly involve with fashion will download music files because this behavior is viewed as a symbol of new life style (H4). Human beings, while they actively and crazily follow the latest fashion, may be induced to download music to keep in the trends and be recognized by peers. The evaluation of the consumption value and value difference is influenced by one's need to pursue an image of fashion (H5). This result indicates that most of the respondents in this study, though paying a small amount of monthly fee to be allowed to download unlimited music songs, are actually selective in choosing music to be downloaded.

In addition, people highly involved with fashion might perceive higher epistemic value from music download (H6b). These people are very likely hoping to be current and knowledgeable in their beloved trends. The abundant resources provided by P2P platform may help them in achieving this objective. Surprisingly, H6a was rejected. This result may due to that people satisfy their desire for associating with peer groups via many mechanisms, and that P2P platform provides only limited socialization utility.

The results of this study have implications for practitioners. Consumers probably neutralize their behavior by norms not approved by the current market economy. Simply proclaiming intellectual property rights and the norm of anti-piracy may be ineffective for diminishing unauthorized music download. To attract customers, companies should try their best to apply and realize the benefits of the new technology to increase their consumers' value and satisfy their needs for fashion. The design of the content and meaning of CD albums should coincide with the metaphors of the latest trend and emotional needs for a sense of belonging to that trend.

Music companies can also try their best to improve the value of CDs, or reduce the value from download. This can be done through adjusting components of consumption value: utility or costs for these two alternatives. For example, companies can provide multiple and free choices in reasonable prices to their customers [13,2]. The success of iTunes and other on-line music selling companies may firmly support the above idea. To improve the perceived epistemic value, valuable resources such as information related to fashion trends, rarely found music, and/or famous singers can be circulated among CD buyers and

then go public at a later time. Pricing strategy is important in inhibiting music download. Higher price of CD will increase consumer surplus from download music, hence encourage music pirate [13]. In context of higher price, group pressure is more effective, hence forces one to download to be in accordance with peers. Inexpensive price, on the contrary, may prevent massive music download [56]. Chen and Png [5] also indicate that the effect of price cut is better than that of the act to enforce copyright. Another way to increase cost of music download may be taxation. Taxation of copying equipment and media will reduce consumer surplus from consuming illegal music, but has no effect on CD price, and may reduce expenses on law enforcement [5]. Finally, increasing acts of law clampdown, though may be the least effective among various instruments to prevent illegal download of music [5], and may not be effective in the short term, will raise the cost of pirating on both customer and P2P players' side, which could decrease the value of music downloading and enforce P2P players turning into a legal business model.

Fashion is empirically supported to influence behavioral intention to download music files. Most of the subjects were light users of P2P systems. Based on findings of this study, it is argued that those users may highly involve with fashion; hence, they download only music files coincide with their beloved trends. But the explanatory power of this argument still need be further investigated. Theoretically, piracy may raise demand of legitimate software through positive demand side externalities [7]. Since P2P architecture is a system with positive network externality, the same effect should also present in the context of music download. The effect of network externality should further be examined since empirical evidence conflicts with the above assertion [20]. The research model does not include any antecedent of perceived value or perceived value difference. What causes the high value or value difference between P2P and music CD deserves further investigation because practitioners in the music industry might be interested in how to overcome the threats posed by music download.² The findings of this study suggest that moral reasoning may play a role, other than antecedents predicted by previous researches, of moderator in shaping an individual's intention to download music. The role of moral reasoning could be reexamined in future research. The value of Chi-square/df of the current research model meets with the threshold of 5.0 suggested by some liberal researchers [60]. A better fitting model, however, should have a Chi-square/df value less than 3.0. A further refinement of the current model based on theory of consumption value and fashion is needed in the future. Readers of this paper should be cautious that the quality of the measurement scales of this study is not satisfactorily good enough. A refinement of the measurement scales may improve the

² The authors thank for one of the anonymous referee for this helpful comment.

model fitting to a great extent. This study assumed that CDs and music files are substitutes for each other; the natures of software and music files, however, are not exactly the same. Sandulli [44] also indicated that “when studying the relationships between P2P music and CD music, not all the P2P users follow the same behavior. Some P2P users could consider P2P music as a substitute for CD music; while some other users would consider P2P music as a supplementary good for CD music (p. 332).” This premise, hence, may need to be re-examined in the future. Finally, readers should be cautious in interpreting the results of this study since the sampling procedure is not random.

Appendix. Measures for the variables

Fashion involvement

- F11 I like to gather information about the current trend in some specific fields
- F12 If I get the chance, I would like to try the activities in which the others are engaged
- F13 I would pay attention to the trend in society, and have the courage to present myself as the trend
- F14 I would consider the social meaning of my behavior before I proceed
- F15 I would try to present myself as the most up-to-date trends

Behavioral intention

- BI1 I would download mp3 music files without hesitation to satisfy my need
- BI2 If there is a P2P platform providing mp3 music files for downloading, I would accept it without hesitation
- BI3 I would offer my friends or classmates mp3 music files
- BI4 I download mp3 music files
- BI5 I encourage others to download mp3 music files

Value

- V1 I can fulfill my need for listening to the music from downloading and enjoying free mp3 music files
- V2 I can fulfill my need for collecting music from downloading free mp3 music files
- V3 I can familiarize the trends of music from collecting and comprehending free mp3 music files
- V4 I can ease off my pressure and/ or kill time from enjoying free mp3 music files
- V5 I can improve the social interaction among peers, and fulfill the requirement of social activities of my social circles from owning free mp3 music files
- V6 I can easily share music with and communicate information regarding music to others from owning free mp3 music files
- V7 It is convenient and time saving for me to get music from downloading free mp3 music files
- V8 I can find the music that is rare and hard to find from P2P platform providing free mp3 music files

- V9 Downloading music from P2P platform fulfills my need for having comprehensive categories of music and abundant information
- V10 P2P platform that I used most frequently provides a good assortment of music to choose from
- V11 P2P platform that I used most frequently provides music with high acoustic quality
- V12 I feel pleasant in the process of getting music from P2P platform
- V13 I receive good services from and keeping good interactions with the P2P platform in the process of getting music

Value difference

CD albums	<input type="checkbox"/>	Free music						
far exceed								far exceed
in								
free music	-3	-2	-1	0	1	2	3	CD albums
								in

- VD1 Satisfying my need for listening to the music
- VD2 Satisfying my need for collecting music
- VD3 Satisfying my need for familiarizing the trends of music
- VD4 Satisfying my need for easing off the pressure and killing time
- VD5 Satisfying my need for social interaction and activities
- VD6 Satisfying my need for sharing and communicating music with others
- VD7 Satisfying my need for convenience and saving time in getting music
- VD8 Satisfying my need for finding the music that is rare and hard to find
- VD9 Satisfying my need for having comprehensive categories of music and abundant information
- VD10 Providing a good assortment of music to choose from
- VD11 Satisfying my need for high music quality
- VD12 Satisfying my need for feeling pleasant in the process of getting music
- VD13 Receiving good services from and keeping good interactions with music providers in the process of getting music

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