

## Decision-Making Models for Using Multimedia Marketing in Enterprises

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### ABSTRACT

This study has three purposes: to understand the enterprises' expectations and needs of using multimedia marketing, to examine the reasons behind enterprises' rejection of multimedia marketing, and to verify whether multimedia marketing meets the expectations of the enterprises. This study combines the technology acceptance model (TAM) and expectation confirmation theory (ECT) to investigate Taiwanese enterprises' perspectives of using multimedia marketing by employing the questionnaire technique. A total of 288 valid paper questionnaires (143 companies did not use multimedia marketing, while 145 did) were collected after eliminating invalid ones. As a result, this study shows that TAM and ECT are suitable models for explaining the enterprises' behavior of using multimedia marketing. Perceived ease of use is an important factor for enterprises that do not use multimedia marketing. In addition, both perceived ease of use and perceived usefulness are important factors that affect the enterprises' continuance intention to adopt multimedia marketing.

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### INTRODUCTION

Companies typically employ a variety of marketing methods to achieve the goal

of selling products. A major traditional marketing method is to place ads in newspapers and magazines. However, following the explosion of information technology, more companies are marketing their products via information media such as websites, e-mails, online platforms, cell phones, and so on (Gupta et al., 2017). The characteristics of multimedia can enhance a product's presentation and increase marketing effectiveness because multimedia draw consumers' attention to the products and boosts the sense of entertainment (Hoogeveen, 1997; MacLenna & Van Belle, 2013). In addition, in recent years, companies such as Toyota, IBM, and Sun Microsystems have started to use 3D virtual worlds to help consumers to become more engaged, increase their learning ability, and change their perceptions (Keng & Liu, 2013; Wasko et al., 2011; Yoo et al., 2015). Consumers can better understand the products and the company image via 3D virtual worlds, which enables the companies to reach their marketing goals (Baker et al., 2019; Choi & Taylor, 2014; Hong et al., 2006). Nevertheless, Hoogeveen (1997) pointed out that multimedia did not necessarily bring about added value, and although multimedia could create new sensations, companies still needed to invest a certain amount of money. For this reason, many companies still have some reservations about using multimedia marketing activities. Additionally, past studies concerning the acceptance of various types of media have generally focused on consumer perceptions (Chang, 2009; Daugherty et al., 2008; Jeon

et al., 2011; Liu et al., 2013), and some suggested the importance of a company's internal degree of acceptance of multimedia (Gupta et al., 2017; MacLenna & Van Belle, 2013). Through empirical research, this study hopes to understand the main reasons companies use (or do not use) multimedia in marketing activities, the degree of satisfaction after using, and whether the results are consistent with the expectations of using multimedia. The study also discusses company expectations for multimedia marketing and the suitability of multimedia marketing.

## LITERATURE REVIEW

### Multimedia Marketing

Multimedia represents a multiple channel approach, involving the combined use of various cognitive media, such as voice, music, text, graphics, animation, and video (Hoogeveen, 1997; Marmolin, 1991). Since different types of media have different effects, the use of various media is likely to bring about different results (Daugherty et al., 2008; Hoogeveen, 1997). For instance, past studies have shown that although the use of text provides detailed descriptions, images can compensate for certain cognitive shortcomings, and the use of multimedia can increase work performance under such situations (Chen & Sun, 2012; Colliot & Jamet, 2018; Mutlu-Bayraktar et al., 2019). However, some scholars are opposed to this view and feel that a high degree of multimedia usage does not necessarily lead to mission accomplishment or emphasize

information and knowledge; instead, they believe that the use of multimedia only boosts the entertainment effect (Pastore, 2016; Pincus et al., 2016).

Marketing activities include advertising, sales promotion, publicizing, packaging, and news media reporting. These enable companies to deliver unified information and product value to the public (Chang, 2009). Among previous studies, Battiato et al. (2009) used a multimedia messaging service (MMS) to send advertisements to cell phones and track consumer behavior, intending to boost the sales personnel's performance results. The use of MMS in marketing is not only convenient but also effective to a certain extent. On the other hand, the study of Danaher and Rossiter (2011), which focused on the marketing results of different marketing channels, showed that emails could use various types of multimedia to present content. As internet speed becomes faster and new, free technologies become increasingly available for download from the web, MMS can be launched on different channels to reach more customers, such as video real-time applications and social network sites (Chang et al., 2017). However, the study also found that consumers are still more open to traditional marketing channels, e.g., newspaper, radio, and television, and perceive these information sources as more trustworthy and reliable.

The concept of multimedia marketing has been widely discussed in prior studies, but its practical uses have shape-shifted in different applications in different contexts

as more advanced technologies become accessible to us. For example, multimedia marketing can be referred to as an interactive platform. Second Life (SL) of Linden Lab is a 3-dimensional (3D) platform that allows multi-players to conduct various activities, such as online meetings or training. All SL players can be easily engaged in a variety of exchange activities by using SL's text or voice message functions. More 3D ads are also used to have consumers engaged in vivid emotional and psychological virtual experiences, and different research findings have confirmed that multimedia's influence on consumers' attitude toward brands and purchase intentions are different (Daugherty et al., 2008; Keng & Liu, 2013; Liu et al., 2013). However, Wasko et al. (2011) suggested that the number of 3D virtual world users continued to grow every year, and the 3D effects offer a new internet world that produces new economic values (Choi & Taylor, 2014; Yoo et al., 2015). The above studies clearly show that multimedia brings about more flexible and diverse marketing activities; however, it is uncertain whether it improves their effectiveness.

The companies that participated in the current study are listed in an exchange or are traded Over-The-Counter (OTC). Even though they all have official websites and marketing departments, some believe that there is no need to use multimedia for marketing, and some companies conduct limited multimedia marketing activities as long as these continue to make profits for their shareholders in the stock market. Therefore, multimedia marketing is defined

here as the use of more than one media, e.g., MMS plus social networks or MMS plus virtual objects, to promote a company's products/services through marketing activities to achieve its communication goals.

### **Technology Acceptance Model (TAM)**

The technology acceptance model (TAM) was proposed by Davis (1989). The TAM is widely used to investigate users' degree of acceptance of information technology (IT) and their willingness to use IT in the future as a way to identify potential IT users. Two important factors in the TAM are the users' perceived usefulness and perceived ease of use. These two factors affect the users' attitude toward a system, and the resulting attitude further influences their behavioral intention to use the system. Numerous empirical studies have so far verified the TAM, and the majority of the studies have found that perceived usefulness is the most influential user factor (Abdullah et al., 2016; Renny et al., 2013; Wu & Chen, 2017). Apart from perceived usefulness and perceived ease of use, many scholars have included other factors, such as subjective norms and entertainment, when investigating the intention to use IT for learning or online shopping (Agag & El-Masry, 2016; Hong et al., 2011; Lee, 2010; Renny et al., 2013). The influence of customer loyalty, trust, entertainment, and service quality on users' acceptance of e-service was also explored in their research (Chiu et al, 2005; Pincus et al., 2016; Renny et al., 2013).

The TAM is often compared to the expectation confirmation theory (ECT). For example, Hong et al. (2006) supported using the TAM to predict users' future intention to use IT, but in light of the model having been used by many scholars to test whether IT users will continue to use the technology, Hong simultaneously tested the TAM and ECT and proposed that the TAM can measure users' willingness to continue using the IT after the first use. Some studies combined TAM and the theory of planned behavior (TPB) to explore users' behavioral intentions on IT use (Lee, 2009; Shiau & Chau, 2016). Lee (2010) integrated TAM, ECT, and TPB to study user experience and potential users and suggested that the satisfaction derived from the users' first-hand experience was the most significant factor for future intention to use.

### **Expectation Confirmation Theory (ECT)**

The expectation confirmation theory (ECT) was proposed by Oliver (1980). The ECT mainly explores the discrepancy between consumers' expectations before the purchase and the actual experience of perceived performance, as well as the influence of such discrepancy on consumer satisfaction and purchase behavior. In other words, confirmation affects customer satisfaction, which in turn affects consumers' intention to make a repeated purchase. When employing the ECT to investigate users of online banking services, Bhattacharjee (2001) found that users' intention to continue using an information system (IS continuance

intention) was based on their satisfaction and perceived usefulness; as a result, the model was adjusted to include four constructs: confirmation following system use, perceived usefulness, satisfaction, and IS continuance intention. Among these, confirmation following system use and perceived usefulness both influence satisfaction, while perceived usefulness and satisfaction influence IS continuance intention.

Currently, the ECT is used extensively to measure the degree of satisfaction and continuance intention for a myriad of information systems (IS) (Ayanso et al., 2015; Chiu et al., 2005; Jin et al., 2013; Liao et al., 2007; Mohammadi, 2015; Veeramootoo et al., 2018). For example, the ECT was applied to investigate the continuance intention of e-learning (Chiu et al., 2005), the continuance intentions of physicians with electronic medical records (Ayanso et al., 2015), or the continuance usages of e-government services (Veeramootoo et al., 2018). These studies agree that the perceived usability or perceived usefulness of the system influence satisfaction and continuance intention; the studies also reveal the effect of other factors on the continuance intention, such as user's habit, perceived quality, perceived value, and perceived risk. In addition, some studies integrated different models into ECT to explore the antecedents influencing users' levels of satisfaction and continuance intention for various IS. For example, Liao et al. (2007) integrated the ECT and the TPB in a study of the continuance intention

for an e-service and added constructs such as perceived ease of use, subjective norm, and perceived behavioral control into the original model. The findings show that customers' continuance intention depends on their satisfaction, perceived ease of use, and subjective norms. Mohammadi's (2015) study integrating the ECT and TAM also found that subjective norm plus perceived image were important antecedents of Iranian users' intention to use m-learning. These results suggest that the extended ECT models integrating another model to include other aspects of influences would have more explanatory power than the original model. However, the two constructs in the TPB model, i.e., subjective norms and perceived behavioral control, are more appropriate for exploring individuals' personal attitudes and perceptions, not at the enterprise level. Therefore, to achieve the purpose of the current study, the TAM and ECT are combined to investigate Taiwanese enterprises' perspectives of using multimedia marketing.

## METHODS

### Research Framework and Hypotheses

This research examined the views concerning multimedia marketing of companies that used it (the "M Group") versus those that did not (the "NM Group"). The TAM was originally proposed to measure the attitude of users who had not accepted technology. Therefore, this research made use of the TAM to gauge the viewpoints of the NM Group; the relevant model is shown in Figure 1. Companies may use the ECT to

confirm whether their use of multimedia marketing meets their expectations. Because the TAM suggests that perceived ease of use influences perceived usefulness, this study went beyond the ECT to hypothesize that perceived ease of use had a positive influence on perceived usefulness. The study then compared the same constructs in both models to see the difference of these dimensions between the companies that used multimedia marketing and those that did not. Figure 2 shows the model for the NM Group. Based on the above description, this study proposes the following hypotheses concerning the NM Group:

- H1a: The users' perceived ease of use has a positive impact on their perceived usefulness.
- H1b: The users' perceived ease of use has a positive impact on their attitude.
- H1c: The users' perceived usefulness has a positive impact on their attitude.
- H1d: The users' perceived usefulness

has a positive impact on their behavioral intention.

H1e: The users' attitude has a positive impact on their behavioral intention.

The study proposes the following hypotheses for the M Group:

H2a: The users' use with expectation has a positive impact on their perceived usefulness.

H2b: The users' use with expectation has a positive impact on their perceived ease of use.

H2c: The users' perceived ease of use has a positive impact on their perceived usefulness.

H2d: The users' perceived usefulness has a positive impact on their satisfaction.

H2e: The users' perceived usefulness has a positive impact on their continuance intention.

H2f: The users' satisfaction has a positive impact on their continuance intention.

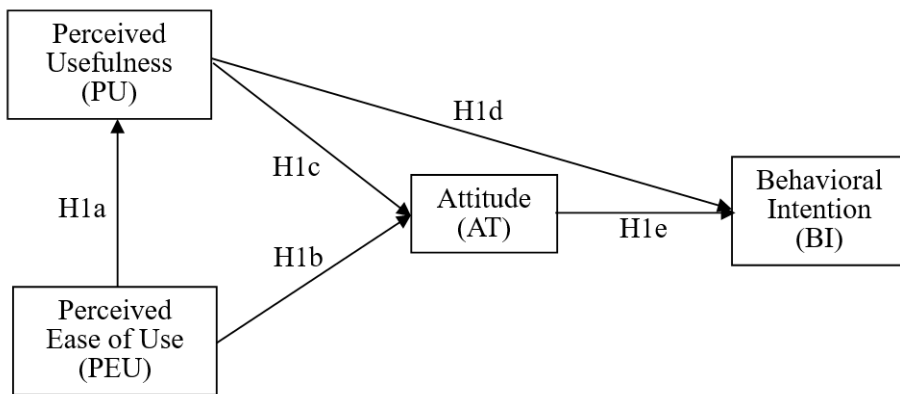


Figure 1. The model for the NM group



Figure 2. The model for the M group

### Questionnaire and Data Collection

The study was designed based on the relevant literature (Bhattacharjee, 2001; Davis, 1989; Hong et al., 2006; Lin et al., 2005; Lu et al., 2009; Roca et al., 2006). A seven-point Likert scale was used. The formal questionnaire was revised based on the opinion of 11 scholars in the field of marketing in Taiwan (see Table 1 and 2). Before starting on the questionnaire, all respondents were presented with the operational definition of multimedia marketing and some examples. Then, they had to answer two screening questions. One is to decide whether they consider multimedia marketing important to their companies. If so, they were regarded as the M Group, and *vice versa*. The other one was to select the multimedia tools from a list to re-confirm that they had previously used them for marketing. For the NM Group, this second question was skipped. The respondents of the formal questionnaire consisted of 484 exchange-listed and OTC-listed companies in Taiwan. Being an

exchange-listed and OTC-listed company means that its securities are traded in a standardized process. The listed companies are not necessarily large, but their annual financial reports are usually credible before their securities can be approved to be traded in the stock market. The companies were listed in the stock market after 2016. Then, information about the listed companies was obtained from the Taiwan Stock Exchange (<https://www.twse.com.tw/en/>) and the Market Observation Post System (<https://emops.twse.com.tw/>) by searching for their corresponding industry sectors, however closely or remotely related to the research topic (multimedia marketing). For example, the companies listed in the sectors like communication and the internet, information services, and tourism were categorized as a member of the M group. The companies' official websites were also visited to re-confirm the category. Using the same approach, the NM group was formed and properly screened for this research. Finally, the questionnaires were distributed to these

companies' customer service contact person within a span of 30 days. A total of 1,452 paper questionnaires were distributed and 309 were recovered, making the recovery rate 21%. The valid questionnaires totaled 288 after invalid questionnaires were eliminated. Among the valid samples, the researchers made follow-up contacts with the companies either by email or by phone to verify their marketing needs and tools. As a result, 143 companies confirmed that they did not use multimedia marketing (the NM Group), while 145 did (the M group). To be noted, the invalid questionnaires were eliminated due to several reasons. First, by observing all the responses, six were removed immediately (NM: 4, M: 2) for giving identical answers to all the questions. Then, four incomplete responses toward the end of the questionnaire were found, and thus they were removed as well (NM: 3, M: 1). Finally, nine responses entered the wrong group (NM: 2, M: 7), and one response was not sure which group the company belonged to after the follow-up contact. In short, a

questionnaire was removed if it contained these mistakes, and if the respondent answered the questions for a company other than their own.

This study employed the statistical program SPSS 17.0 and LISREL 8.51 to perform the confirmatory factor analysis (CFA) and structural equation modeling (SEM) analysis in order to verify the reliability and validity of the questionnaire and test whether the study's model and hypotheses were valid. A demographic breakdown of the recovered valid samples in this study is shown in Table 3. In the NM Group (N=143), 39.9% of the respondents were male and 60.1 were female; most were between 26 and 35 years old (54.4%); the majority received college education (67.6%); half of them had 1 to 6 years of work experience (50%). In the M group (N=145), 45.7% were male and 54.3% were female; most were between 26 and 45 years old (78.4%); the majority received college education (75.7%); 42.1% had more than 10 years of work experience.

Table 1  
*Questionnaire for the NM group*

Construct	Measurement Item
Perceived ease of use	PEU1 I think using multimedia marketing is easy.
	PEU2 I think multimedia marketing is easy to understand.
	PEU3 I think using multimedia marketing can easily bring about the results that I'm after.



Table 1 (Continued)

Construct	Measurement Item	
Perceived usefulness	PU1	Using multimedia marketing can improve the effectiveness of communication.
	PU2	Using multimedia marketing can improve the effectiveness of marketing.
	PU3	Using multimedia can make marketing easier.
	PU4	I think multimedia marketing is very helpful for marketing.
Attitude	ATT1	I think multimedia marketing is attractive.
	ATT2	I am interested in multimedia marketing.
	ATT3	I would be very willing to use multimedia marketing.
Behavioral intention	BI1	In the future, I will use multimedia marketing to help with the company's marketing.
	BI2	In the future, I will actively use multimedia marketing.
	BI3	In the future, I will recommend the use of multimedia marketing to the company.

Table 2

*Questionnaire for the M group*

Construct	Measurement Item	
Confirmed Expectation	CE1	I think the quality of using multimedia meets my expectations.
	CE2	I think the communication effectiveness of using multimedia meets my expectations.
	CE3	I think the marketing effectiveness of using multimedia meets my expectations.
	CE4	Overall, I think the outcome of using multimedia meets my expectations.
Perceived ease of use	PEU1	I think using multimedia marketing is easy.
	PEU2	I think multimedia is easy to understand.
	PEU3	I think using multimedia marketing can easily bring about the results that I'm after.

Table 2 (Continued)

Construct	Measurement Item
Perceived usefulness	PU1 Using multimedia marketing can improve the effectiveness of communication.
	PU2 Using multimedia marketing can improve the effectiveness of marketing.
	PU3 Using multimedia marketing can make marketing easier.
	PU4 I think multimedia is very helpful for marketing.
Satisfaction	SAT1 I am satisfied with using multimedia marketing.
	SAT2 Using multimedia marketing gives me a sense of achievement.
	SAT3 Using multimedia marketing is the right thing to do.
Continuance Intention	CI1 In the future, I will continue to use multimedia to help with the company's marketing.
	CI2 In the future, I will use multimedia frequently to help with the company's marketing
	CI3 In the future, I will recommend the use of multimedia marketing to the company.

Table 3

Basic demographics of the samples

Demographic	M group	NM Group	
Gender	Male	39.9%	45.7%
	Female	60.1%	54.3%
Age	21-30	35.8%	22.3%
	31-40	42.7%	40.3%
	41-50	16.6%	26.6%
	Over 50	4.8%	7.2%
Education	High school	2.1%	6.4%
	College	67.6%	75.7%
	Graduate school	30.3%	17.1%
Work experience	<1 year	15.3%	10.0%
	1-3 years	24.3%	18.6%
	4-6 years	25.7%	15.7%
	7-9 years	11.8%	13.6%
	≥ 10 years	22.9%	42.1%

## RESULTS AND DISCUSSIONS

### Reliability and Validity Analysis

The results of the constructs' reliability and convergent validity analyses are shown in Table 4 and 5. The loading of each question exceeded .5; the Cronbach's  $\alpha$  of all constructs exceeded .7; the composite reliability (CR) exceeded .7. These results show that each construct possessed outstanding internal consistency and stability (Hair et al., 2010). The average variance extracted (AVE) of the constructs in this research exceeded .5, confirming

that the data possessed convergent validity (Hair et al., 2010). The discriminant validity results of the constructs are shown in Table 6 and 7. The values along the diagonal are the square roots of AVE, and the non-diagonal values are the constructs' correlation coefficients. Each construct's correlation coefficient should be smaller than .85. In addition, Hair et al. (2010) pointed out that a construct possessed discriminant validity when the square root of AVE was greater than the correlation coefficients between other measured variables.

Table 4

*Reliability and convergent validity of the NM group*

Item code	Loading	Error term	CR	AVE	Cronbach's $\alpha$
PEU1	.65	.10			
PEU2	.73	.08	.74	.95	.74
PEU3	.85	.08			
PU1	.75	.07			
PU2	.63	.06	.87	.97	.87
PU3	.77	.07			
PU4	.71	.06			
ATT1	.61	.07			
ATT2	.88	.07	.83	.96	.83
ATT3	.85	.07			
BI1	.94	.07			
BI2	.99	.07	.90	.97	.90
BI3	.92	.08			

Table 5  
*Reliability and convergent validity of the M group*

Item code	Loading	Error term	CR	AVE	Cronbach's $\alpha$
CE1	.75	.08			
CE2	.80	.08	.98	.68	.90
CE3	.82	.08			
CE4	.79	.08			
PEU1	.80	.11			
PEU2	.91	.09	.96	.56	.81
PEU3	.75	.08			
PU1	.51	.07			
PU2	.67	.06	.97	.64	.88
PU3	.78	.07			
PU4	.76	.06			
SAT1	.69	.08			
SAT2	.60	.08	.97	.66	.85
SAT3	.66	.07			
CI1	.85	.06			
CI2	.86	.07	.98	.86	.94
CI3	.86	.07			

Table 6  
*Discriminant validity of the NM group*

Variable	PEU	PU	ATT	BI
PEU	.71			
PU	.85	.80		
ATT	.71	.72	.80	
BI	.67	.59	.76	.87

Table 7

*Discriminant validity of the M group*

Variable	CE	PEU	PU	SAT	CI
CE	.83				
PEU	.66	.75			
PU	.69	.76	.80		
SAT	.76	.77	.91	.81	
CI	.55	.52	.80	.83	.93

### Path Analysis

For the NM Group's model, the goodness-of-fit index normed chi-square=1.93, GFI=.89, SRMR=.06, NNFI=.93, CFI=.95, and IFI=.95. For the M group's model, the goodness-of-fit index normed chi-square=2.37, GFI=.83, SRMR=.06, NNFI=.91, CFI=.93, and IFI=.93; all exceeded the recommended thresholds (Bagozzi et al., 1988; Bentler & Bonett, 1980; Hair et al., 2010). These findings show that for both groups, both the data and the model had an outstanding goodness-of-fit.

The verification of the models' cause-and-effect relationships began once the goodness-of-fit was confirmed. The results of the path analysis are shown in Figures 3 and 4. Within the model for the NM Group, hypotheses H1a, H1b, and H1e were confirmed, which implies that the TAM is applicable for examining multimedia marketing use, and that perceived ease of use is an important factor of perceived usefulness and attitude toward multimedia marketing use. In other words, when a company has a positive attitude toward multimedia

marketing, it will want to use multimedia in its marketing. Furthermore, the results show that H1c and H1d did not hold, which indicates that although the companies that did not use multimedia marketing might believe that it was an effective marketing tool, their attitude toward multimedia and their future intention to use it were nevertheless not affected, and their attitude toward multimedia could only be influenced by their perception of its ease of use. In short, even when the marketing personnel believes that multimedia marketing could bring about good results, companies would not necessarily use multimedia for marketing as long as these marketing tools are not easy to use. Therefore, we conclude that ease of use is the chief factor when a company decides not to use multimedia.

Among the factors in the model for the M group, hypotheses H2a, H2b, H2c, H2d, and H2f were all confirmed. This means that perceived usefulness and perceived ease of use can be used to measure the effect of multimedia in the area of multimedia marketing. Through user satisfaction,

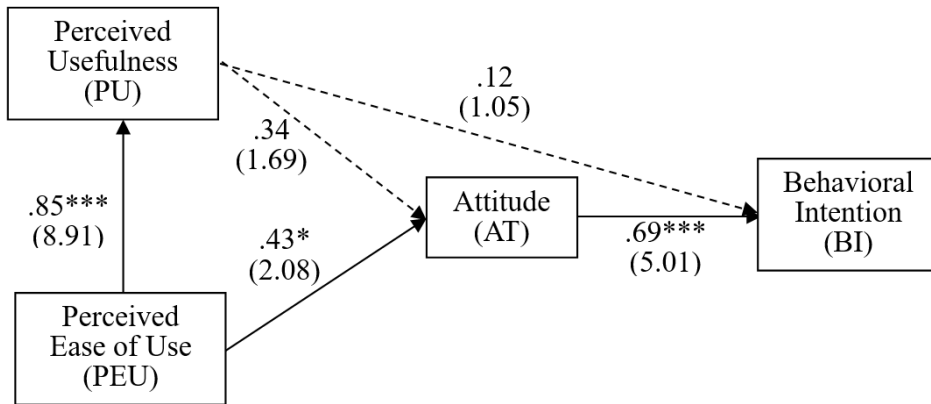


Figure 3. The model and paths for the NM group



Figure 4. The model and paths for the M group

perceived usefulness can influence marketing personnel’s continuance intention for multimedia marketing. However, H2e did not hold to be true, which indicates that simply recognizing the usefulness of multimedia in marketing is not enough. Rather, its effectiveness has to reach the level of expectations by the marketing personnel before it will be used continuously for marketing activities.

## Discussions

According to this study’s results, perceived ease of use affects perceived usefulness and attitude, which in turn affects behavioral intention among employees whose companies did not use multimedia marketing. These findings show that perceived usefulness does not significantly affect attitude and behavioral intention, which is consistent with past research

findings. The study of Daugherty and Biocca (2008) discovered that although presenting products through multimedia could boost consumers' learning effect, it did not affect their attitude and purchase intention. Similarly, the study of Hong et al. (2011) found that digital archive users' perceived usefulness did not affect their intention to use, and the most important factor that influenced the use of digital archives was perceived ease of use. The current study shows that to develop a company's intention to use multimedia marketing, the only viable path is through perceived ease of use affecting attitude affecting behavioral intention. To discuss this from another angle, perceived ease of use can influence perceived usefulness and attitude, but perceived usefulness does not significantly influence attitude. It is therefore clear that, compared with perceived usefulness, perceived ease of use has more influence over companies that do not use multimedia marketing.

The multimedia marketing model used in this study is based on the ECT, with the added construct "perceived ease of use" from the TAM model. The findings show that confirmed expectation has a significant effect on perceived ease of use, and perceived ease of use has a significant effect on perceived usefulness. This indicates that perceived ease of use is also an important factor for companies that use multimedia marketing. In short, perceived ease of use and perceived usefulness are two important factors affecting the use of multimedia marketing (Renny et al., 2013). Although

perceived usefulness does not directly affect continuance intention, the latter can be influenced by satisfaction, which indicates that even though multimedia marketing delivers certain results, only a certain degree of satisfaction will induce a company to continue to use multimedia. The findings of the current study are consistent with Lee's (2010) results concerning e-learning, in which satisfaction is an important factor of continued use. However, apart from satisfaction, Lee (2010) also discovered that objective factors and subjective norms, such as the public's viewpoint and peer pressure, might also influence users' continuance intention. Currently, companies often outsource system tasks to system suppliers; as a result, service quality is likely one of the most important factors for the companies' continuance intention for using multimedia in their marketing activities.

Based on the above discussion, this study concludes that for companies that do not use multimedia marketing, perceived ease of use is an important factor that influences their lack of intention to use it. On the other hand, for companies that do use it, perceived ease of use, and perceived usefulness are equally important. This study is different from other technology adoption studies because it is not just an application of known models (TAM and ETC); it further reveals that it is not the same factor that determines whether a company becomes a user or a non-user of multimedia marketing. While perceived ease of use was important for both groups, perceived usefulness was important only for the M group and had no

bearing on the NM group. In addition, to induce a company's continuance intention for multimedia marketing, its degree of satisfaction has to be increased; conversely, the company will unlikely continue to use multimedia for its marketing activities if the degree of satisfaction decreases or is less than expected. An interesting question may be raised here: Did the NM group reject multimedia marketing not simply because they perceived it as not easy to use but because they valued the tool's ease of use more than its usefulness? That is when it comes to technology adoption, do the non-adopters tend to value a tool's convenience more than its effectiveness? If so, then it is not the tool's properties themselves but the companies' value system (what they believe to be their priorities) that really drive the technology adoption of multimedia marketing, and that may be a deeper root cause than the individual factors in the TAM or the ETC. In other words, the adoption of multimedia marketing depends on the company's culture/priorities and not on the actual ease of use of the tool itself. With the same rationale, one might conjecture that some companies continue to use multimedia marketing because they set both convenience and effectiveness as priorities and believe that both are key to their communication goals. The current study also concludes that as a company value multimedia marketing's usefulness more than its ease of use, the levels of satisfaction and continuance intention increases.

### **Suggestions and Conclusion**

The results of this study prove that through attitude, perceived ease of use can indirectly influence behavioral intention in the case of companies that do not use multimedia marketing. In addition, for companies that use multimedia marketing, perceived ease of use may influence satisfaction through the mediation of perceived usefulness, which in turn affects continuance intention. This shows that whether a company uses multimedia marketing or not, perceived ease of use is an important factor that influences the company's willingness to try or to continue to use multimedia marketing (Hong et al., 2011). Accordingly, a company can increase its employees' perceived ease of use of multimedia marketing tasks through education and training. Multimedia marketing should be considered not only as a means to achieve the company's goals but also as an end to inspire the employees to build a different company culture (Baker et al., 2019). As more information systems and technological tools can now be considered multimedia, the marketing strategies should be more comprehensive and should be a shared responsibility of all departments within the company.

Multimedia marketing tasks may be outsourced to reduce user rejection of use and make employees truly appreciate the advantages of using multimedia in marketing tasks. Multimedia service providers must therefore emphasize the results and advantages brought by multimedia and strengthen the companies' confidence in



multimedia use by enhancing the usability of the multimedia user interface, which will increase the perceived usefulness and perceived ease of use of multimedia marketing (Chang et al., 2017). Furthermore, because service quality in an outsourced service is very important, the providers should offer various service plans based on the needs of different companies and should improve their existing service quality to boost customer satisfaction and ensure the continued use of multimedia (Mutlu-Bayraktar et al., 2019).

This study explores the factors affecting multimedia marketing use and satisfaction based on the results from 484 exchange-listed and OTC-listed companies in Taiwan. The companies are in different industry sectors. However, even though some sectors may use multimedia as major marketing tools, some companies' activities are determined by profit and may not consider multimedia a necessity, as was discovered during the phone/email follow-up conversations. In other words, this study did not conduct a classification or a comparison based on industry type, future research may investigate whether the use of multimedia in marketing activities depends on the type of industry. The current study only considers those that are in the stock market (exchange-listed and OTC-listed companies). Even though this recruitment strategy can guarantee the companies are healthy and wealthy and therefore more eligible than other small and medium-sized companies, one might see a more stark contrast between the two groups (M or

NM) if extreme cases (e.g., Highly M vs. NM Groups) were to enter this study and take the questionnaires. Those companies in the Highly M Group may offer more insights into their business activities that use multimedia marketing during the follow-up interviews. The hypothesis verification outcomes of the theoretical models, as well as the comparison results of the two groups, may be different from the current findings. In addition, the range of multimedia is very broad: Animation, dynamic webpage, audiovisual, Flash, and interactive media are very different from each other. This study's operational definition of multimedia marketing is somewhat conservative due to the characteristics of the participating companies by describing it as the use of more than one media, such as MMS plus other latest technological tools. Different types of multimedia can entice different human senses and affect a company's multimedia marketing effectiveness differently. Therefore, future research may explore how different types of multimedia affect companies' willingness to use multimedia marketing and their satisfaction.

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