

## UNDERSTANDING THE UNIVERSITY STUDENTS' BEHAVIOR TOWARDS MOBILE VIRAL MARKETING: AN APPLICATION OF THE THEORY OF PLANNED BEHAVIOR

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### Abstract

Past studies conducted research about Mobile Viral Marketing focusing on the usefulness of Mobile Viral Marketing from the marketers' perspective and little information exists regarding the motivations, attitudes, and behaviors of consumers engaged in the new phenomena of Mobile Viral Marketing, especially in the context of developing countries such as Egypt. In the era of globalization and in the light of the on-going technological revolution, this knowledge is valuable and should be unveiled to provide a guiding light for marketers and companies on how to properly formulate a successful mobile viral marketing campaign that will reach target segment. The focus of this study is to utilize Ajzen's theory of planned behavior to study university students' actual mobile viral marketing behavior. To apply the theory of planned behavior, questionnaires were manually passed out to 404 Egyptian private university students to examine young Egyptian consumer's actual mobile viral marketing forwarding behavior through studying their mobile viral marketing attitude, subjective norm and perceived behavioral control and behavioral intention. The outcome of the study is that the young Egyptian consumer's attitude towards mobile viral marketing, subjective norm and perceived behavioral control collectively predicted their behavioral intention and their behavioral intention predicted their actual behavior towards mobile viral marketing. The study shed light for researchers and marketers alike on the critical components of mobile marketing strategies and sets the ground for future research in the emerging field of mobile viral marketing.

**Keywords:** Mobile Viral Marketing, Globalization, E-business, Integrated Marketing Communication, Theory of Planned Behaviour.

### 1. Introduction

The last decade has witnessed stupendous improvements in the area of fixed internet and wireless technology, paving the way for new of communication: mobile viral marketing. Mobile phones are an essential tool to be implemented across organizations because it allows people to be connected to each other through location-based marketing, interactive applications and videos. The rapid growth in mobile adoption has opened new marketing communications and targeting possibilities (Lamberton et al., 2016). After the push and pull marketing strategy, mobile viral marketing (MVM) is the latest mobile marketing strategy (Wiedemann, 2007). In its simplest form, viral marketing is merely an advertisement that is in some way tied to an electronic message to spread information about a product or brand. It can be attached to an e-mail, video spot or posted in any form of social media. The basis of viral marketing is in the spread of information by word-of-mouth, but modern technology has allowed the viral effect to include many Internet-based platforms as well. MVM utilizes the same viral effect and relies on consumer to transmit mobile viral content via mobile communication techniques, tools and devices to other consumers in their

social circle and to animate these contacts to also transmit the content (Wiedemann, 2007). MVM is an essential area of study because it has added more value to viral marketing (Yang and Zhou, 2011). The value MVM lies in that recipients are more accepting of promotional messages sent by close relatives and friends than those sent directly by advertisers because they have more faith in its credibility (Wiedemann et al., 2008). Moreover, consumers who get the initial promotional message from a familiar contact within their social circle proved to participate more frequently in the MVM campaign as initial contacts. Consequently, MVM is a prominent approach to extend a promotional message's reach and for marketers to influence consumers at a little or no extra cost. In order to construct a proper MVM campaign, it is essential to understand the recipient's attitude towards mobile viral marketing, to what degree important relatives and friends in a person's social circle impact their decision to pass along mobile viral content, to what degree a person perceives they are in control of forwarding mobile viral content and a person's intent and actual behavior towards passing mobile viral content. Currently, there is scarcity in researches that focus on the attitude, intention and actual behavior of the mobile viral consumers engaged in this new marketing phenomenon, especially in the context of developing countries like Egypt. Therefore, this paper aims to answer the following research question 'What is the relationship between the university students' mobile viral marketing attitude, subjective norm, perceived behavioral control and behavioral intention and what impact does it have on their actual behavior of forwarding mobile viral content to important others?' The following study seeks to explore and examine the collective power of attitude, subjective norm and perceived behavioral control on behavioral intention followed by measuring the power of behavioral intention on actual behavior. By doing so, the study seeks to confirm the chain reaction of attitude-intention-behavior in the mobile viral marketing context which has proven to be consistent in previous researches conducted on mobile marketing (and further prove that theory of planned behavior (TPB) can be applied to the MVM context and to provide insight for marketers on what mobile viral marketing strategies to bear in mind when constructing a MVM campaign.

## 2. Literature Review

Besides being an instrument of mobile marketing, MVM is defined as a special form of electronic word-of-mouth (eWOM) marketing that encourages and facilitates consumers to share opinions on a product, service, company, or brand favorably in various virtual social environment such as Social Network Sites (SNS) as well as pass along promotional messages to their relatives and friends on the internet (Hennig-Thurau et al., 2004).

Since there is limited research on this marketing phenomena, MVM still remains a broad term that has no consistent definition. The lack of being on common ground when it comes to MVM has motivated elite researchers to analyze previous definitions of EVM and, mobile marketing in order to derive central attributes of MVM which are ejected from previous academic literature and accordingly, the four main characteristics of mobile marketing are as follows:

1. MVM is based on WOM and therefore refers to any positive or negative interpersonal communication between a receiver and a communicator which the receiver perceives as a *non-commercial* message, regarding products, services or ideas (Wiedemann, 2007; Palka et. al, 2009; Yang et. al, 2012).
2. MVM is both a distribution and communication concept (Wiedemann, 2007; Palka et. al, 2009; Yang et. al, 2012).
3. MVM is based on the viral marketing strategy which encourages individuals to pass on a marketing message to others in order to create exponential growth in the message's exposure and influence. Like viruses, viral marketing takes advantage of rapid multiplication to explode the message to thousands, indeed millions (Kirby and Marsden, 2006; Wiedemann, 2007; Palka et. al, 2009; Yang et. al, 2012).
4. Mobile viral marketing is based on the interactive, ubiquitous and personalized mobile advertising technologies which includes SMS, Rich Media, Mobile applications, Geo-

location, and Growth of Mobile Video (Wiedemann, 2007; Palka et. al, 2009; Swallow, 2010; Kamphuis et. al, 2012).

### 3. Theoretical Framework

The value of theory-based research is pragmatic and cannot be understated. Theories are guiding lights for scholars that pave the way for the direction of their research while shielding them from mistakes made in typical research studies. Based on conceptual interpretations, the theory of planned behavior (TPB) offers scholars abstract model and paradigm to help them explain and interpret the social world

TPB is an extension of the researcher's earlier work Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1980). The extension was the result of a finding that behavior appeared to be not 100% voluntary and under control. This resulted in the introduction of a new determinant, perceived behavioral control. Perceived behavioral control measures how well a person can execute the behavior (Ajzen, 1991). Ultimately, the theory argues that a person's intention to carry out a behavior is influenced by a combination of behavioral attitudes (i.e. a person's beliefs about the desirability of behaviors); subjective norms (i.e. a person's perceived relevance and importance of opinions of significant others); and behavioral control (i.e. a person's sense of control over behavior) (Ajzen, 1991). With respect to MVM, the theoretical framework of the TPB was chosen to guide the proposed study for the following reasons:

1. TPB is congruent with the objective of the study which is to explain the young consumer's attitude, behavioral intention and actual behavior towards passing along mobile viral content.
2. Besides having been used over the past two decades to examine various behavioral intentions and behaviors, the TPB has been applied and validated directly or indirectly across different research in various global contexts about consumer adoption of e-commerce and mobile advertising in different countries (Bauer et al., 2005; Lee et al., 2006; Muk and Babin, 2006; Pavlou and Fygenson, 2006; Shen and Chen, 2008; Tsang et al., 2004; Wong and Tang, 2008; Zhang and Mao, 2008, Yang and Zhou, 2012).
3. To understand the underlying dynamics of young consumers' mobile viral marketing attitudes, intentions and behavior and to further investigate how subjective norm, perceived behavioral control and behavioral intention affect the actual forwarding behavior towards mobile viral content.
4. To confirm the chain reaction of attitude-intention-behavior in the mobile viral marketing context which has proven to be consistent in previous researches conducted on mobile viral marketing (Tsang et al., 2004; Bauer et al., 2005; Lee et al., 2006; Muk and Babin, 2006; Pavlou and Fygenson, 2006; Shen and Chen, 2008; Wong and Tang, 2008; Zhang and Mao, 2008).
5. To provide empirical evidence that TPB is applicable to mobile marketing in Egypt.

The proposed research model is shown for the study in Figure 1:

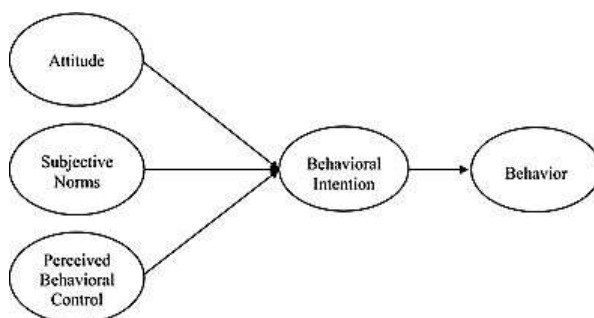


Figure 1: Ajzen's Theory of Planned Behavior

In the mobile viral marketing context, attitude (towards mobile viral marketing) is defined as the consumer's overall evaluation of the likeability of forwarding mobile viral messages via their smartphone devices while subjective norm refers to the person's perception of the expectations of important others about passing along viral marketing content via their smartphone devices. In this study, perceived behavioral control will be defined solely from the perspective of having the internal capability in successfully performing the behavior. In that sense, perceived behavioral control will refer to the person's confidence and sense of ease in being of control in forwarding mobile viral content to significant others in their social circle. In congruence with the TPB and previous researchers, it is conceptualized that smart phone holders are more like to approve forwarding mobile message if the action is proved and practiced by important others in their social sphere. A consumer will also be more motivated to embrace mobile viral marketing if they feel unrestrained and completely in control of forwarding desired mobile viral content to significant others in their social circle. So, with respect to the TPB and past studies, the following hypotheses are proposed:

**Hypothesis 1:** There is a positive relationship between university student's mobile viral marketing attitude and their behavioral intention of forwarding the mobile viral content.

**Hypothesis 2:** There is a positive relationship between subjective norm and the university student's behavioral intention of forwarding the mobile viral content.

**Hypothesis 3:** There is a positive relationship between perceived behavioral control and the university student's intention of forwarding the mobile viral content.

**Hypothesis 4:** There is a positive relationship between university student's behavioral intention of forwarding the mobile viral content and their actual behavior of forwarding the mobile viral content.

#### 4. Method

In the majority of TPB research studies, a survey instrument has been developed to test the efficacy of the theory (Knabe, 2012). Therefore, in the context of this study, questionnaires have been used to measure the variable gathered from the literature survey. University students were chosen as sample for this study because on a global scale, youth consumer have been recognized as more tech-savvy and mobile-savvy than other segment in the population ( Mobile Marketing Association, 2017) and they are the earliest adopters of mobile phones and services. Moreover, young consumers have been frequently targeted by major mobile marketing campaigns in Europe, USA, and the Asia-Pacific region (Choi et al., 2008). Both industry analysts and academics alike are becoming highly concerned with mobile usage among youth (Castells et al., 2004). 404 questionnaires were passed out in person to ensure respondents face no difficulty while answering the questionnaire at the university of Arab Academy for Science, Technology and Maritime Transport. Before administering the questionnaire, Institutional Review Board (IRB) approval has been obtained from the university to collect the data. The questionnaire has been revised from the expertise in the field of Marketing and Behavior specifically professors and assistant lecturers in the Marketing Department at the university to test the external validity of the questionnaire. The purpose of the study has been explained to the study participants and confidentiality was reassured. The questionnaire consisted of 15 questions adopted and adapted from the previous studies of (Shimp and Kavas, 1984; Nysveen et al., 2005; Pavlou and Fygenson, 2006; Kamphuis et. al, 2012; Yang and Zhou, 2012). 5 questions were included at the beginning entailing demographic characteristics.

#### 5. Results

404 completed questionnaires were exposed to statistical tests such as Pearson's correlations test and structural equation modeling test using SPSS v.24 .The descriptive statistics of the university

students are presented in Table 1. All the respondents are smartphone holders and this was an important criterion in order for the respondent to proceed with the rest of the questionnaire. 100 % of the sample is less than 25 years old and this goes in line with majority of smartphone holders belonging to the millennial generation (25 years old and less) and that the study is conducted within university premises where a typical student age does not exceed 25. Students should be from the millennial generation was another criterion to the study. The monthly income of the majority of the sample (46.9%) is from 1,000 LE to less than 3,000 LE and this is justifiable because majority of the student population in Egypt is unemployed and depend on their parents as source of income. It is justifiable that sending and receiving text messages, making and receiving calls and the usage of applications are the top three reasons why university students use their smartphones. After all, the smartphone is phone and the primary function of a phone is to make and receive calls and today's youth wants real-people connections.

Table 1:Demographic Analysis (n=404)

Factor	Results
1. Do you have a Smartphone? (Yes)	404 (100%)
2. Gender	
• Male	213 (52.9%)
• Female	190 (47.1%)
3. Age group (in years)	
• Less than 25	404(100%)
4. Monthly income	
• Less than 1,000 LE	105 (26.9%)
• 1,000 LE – less than 3,000 LE	183 (46.9%)
• 3,000 LE – less than 5,000 LE	57 (14.6%)
• 5,000 LE – less than 7,000 LE	21 (5.4%)
• 7,000 LE and above	24 (6.2%)
5. Reasons of using smart phones	
• Calls	340 (84.2%)
• Sending and receiving text messages	343 (84.9%)
• Sending and receiving multimedia messages	82 (20.3%)
• Applications	279 (69.1%)
• Searching for information	122 (30.2%)
• Online Shopping	25 (6.2%)
• Other	13 (3.2%)

\* Results are expressed as frequencies and (%).

Results of the Cronbach's alpha test are presented in Table 2. Cronbach's alpha test is used to assess the reliability, or internal consistency, of a set of scale or test items which should reflect the concept being measured (Goforth, 2015). Note that a general minimum requirement for average scale reliability is 0.60 (Nunally, 1967; Hair et al., 2006; Sekaran and Bougie, 2010) while some researchers recommend a stricter minimum requirement of 0.70 (George and Mallery, 2003). The study will abide to the 0.70 benchmark that most researchers chose to abide to (Hair et al., 2007). According to Table 2, the Cronbach's alpha coefficient for attitude, subjective norm, perceived behavioral control and behavioral intention are all above 0.70 indicating high internal consistency reliability within the variables meaning that the overall questionnaire is reliable and the following results are considerable.

Table 2: Reliability Test

Indicator	Cronbach's alpha coefficients	N of items
Attitude	.773	4
Subjective norm	.776	4
Perceived behavioral control	.749	2
Behavioral intention	.801	4

A correlation matrix was computed to claim the significance of variables before a path analysis can be implemented because for path analysis to be reliable, variables have to be significant with one another (Cope et al., 2011). Results of the .correlation matrix are depicted in Table 3. With respect to the expressed values of Pearson's correlation coefficients, it is clear that all relationships are significant at the 0.01 level.

Table 3: Correlation Matrix

	Attitude	Subjective Norm	PBC	Behavioral Intention	Actual Behavior
1. Attitude	1				
2. Subjective norm	.472**	1			
3. PBC	.622**	.346**	1		
4. Behavioral Intention	.605**	.567**	.541**	1	
5. Actual Behavior	.471**	.429**	.443**	.581**	1

The Goodness of fit test is an essential step before determining which of the specific paths are significant (Marsh et al., 2004). A model is regarded acceptable if the NFI exceeds .90 (Byrne, 1994) or .95 (Schumacker and Lomax, 2004); CFI exceeds .93 (Byrne, 1994) ; IFI exceed .90; Tucker-Lewis index (TLI) exceeds 0.95 (Hu and Bentler, 1999; Schumacker and Lomax, 2004). The first three fitness indexes exceeded the standard of 0.9 while the last index was slightly below 0.9.

Table 4: Goodness of Fit Model

	Recommended Value	Model Value	Degree of model fit
Normalized Fit Index (NFI)	$\geq 0.9$	.964	Fit
Comparative Fit Index (CFI)	$\geq 0.9$	.967	Fit
Incremental fit index (IFI)	$\geq 0.9$	.968	Fit
Tucker – Lewis Index (TLI)	$\geq 0.9$	.864	Not fit

A path analysis was conducted to test the fit between the data and Ajzen’s model. The endogenous variable behavior was regressed on the intervening variable behavioral intention which was regressed from the exogenous variables attitude, subjective norm and perceived behavioral control. The path estimates from attitude, subjective norm and perceived behavioral control to behavioral intention supported Hypothesis 1, 2 and 3 indicating that attitude, subjective norm and perceived behavioral control. All the main predictor variables from Ajzen’s TPB (subjective norm, attitude and perceived behavioral control) were found to be positive predictors of university students’ behavioral intention towards forwarding mobile viral content. The path estimate from behavioral intention to actual behavior supported Hypothesis 4 indicating that university students’ behavioral intention predicted their actual behavior of forwarding mobile viral content. The R-squared coefficient of Behavioral Intention was approximately 50% (R squared = .50) indicating that the predictor variables (attitude, subject norm and perceived behavioral control) collectively explained 50% of the variance in the university student’s behavioral intention towards forwarding mobile viral content. Behavioral intention explained that 34 % (R-Squared = .34) of the total variance of the variable behavior indicating that this portion of the model is also supported in the context of mobile viral marketing.

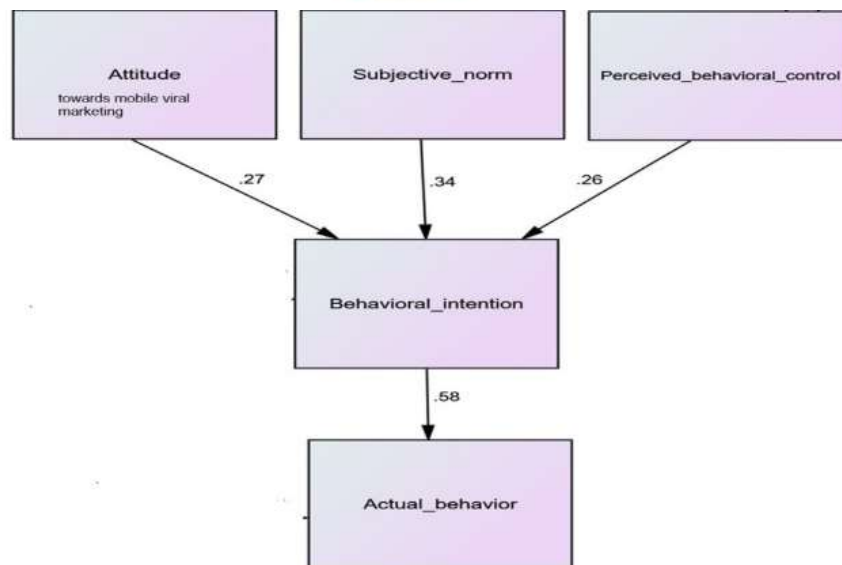


Figure 2: Model with Path Analysis Results

As displayed in Table 5 and Table 6, the total effect of one variable on another is either a direct effect (no intervening variables involved) or an indirect effect (through one or more intervening variables). It is evident that attitude, subjective norm, and perceived behavioral control had a direct effect on behavioral intention and an indirect effect on behavior while behavioral intention has a direct effect on behavior.

Table 5: Effect Coefficients for the Path Model

	Attitude		Subjective Norm		Perceived Behavioral Control		Behavioral Intention	
	<u>Direct</u>	<u>Indirect</u>	<u>Direct</u>	<u>Indirect</u>	<u>Direct</u>	<u>Indirect</u>	<u>Direct</u>	<u>Indirect</u>
Behavioral Intention	.27	-----	.34	-----	.26	-----	-----	-----
Actual Behavior	-----	.156		.197	-----	.150	.58	-----

Table 6: Total Effect for the Path Model

	Attitude	Subjective Norm	Perceived Behavioral Control	Behavioral Intention
Behavioral intention	.27	.34	.26	.000
Actual Behavior	.156	.197	.150	.58

## 6. Discussion

All the main predictor variables from Ajzen's TPB (subjective norm, attitude and perceived behavioral control) were found to be positive predictors of behavioral intention and statically significant at varying strengths. The three predictor variables were also correlated with each other as the theory predicted. Furthermore, behavioral intention was also found to be a predictor of actual behavior. These findings supported past researches (Schulze and Wittmann, 2003; Armitage and Conner, 2004; Tsang et al., 2004; Bauer et al., 2005; Lee et al., 2006; Muk and Babin, 2006; Pavlou and Fygenson, 2006; Thorbjørnsen et al., 2007; Zhang and Mao, 2008; Shen and Chen, 2008; Wong and Tang, 2008; Yang and Zhou, 2011; Yang and Zhou, 2012; Knabe, 2012).

Out of the three predictor variables (subjective norm, attitude, and perceived behavioral control), subjective norm had the strongest relationship with a behavioral intention with a standardized path coefficient of .34 ( $p < .0001$ ,  $n = 403$ ). In the current study; attitude, subjective norm and perceived behavioral control account for 50% of the variance in the university student's behavioral intention to forward viral mobile marketing messages. This was an interesting find compared to previously published research. In the study of (Yang and Zhou, 2011) which utilized both the TPB and TAM to explore the young American consumers' mobile viral marketing behavior, subjective norm did not predict the young American consumers' intention to pass along entertaining electronic messages even though subjective norm effected the American young consumers' attitude toward mobile viral behavior. However, when (Yang and Zhou, 2012) conducted the study with respect to young Chinese consumers in the Chinese context, in which they utilized both the



TPB and TAM along with Palka et al.'s forwarding model to explain the young Chinese consumers' mobile viral marketing behavior, subjective norm had a significant impact on the young Chinese consumer's viral attitude and intention to forward entertaining electronic messages. A possible explanation to why subjective norm had a significant impact in the Egyptian and Chinese context in comparison to the American context is that both Chinese and Egyptian societies are collectivistic while the American Society is highly individualistic. Individualism-collectivism is one of the six dimensions of Hofstede's culture dimension theory which was developed by Geert Hofstede as a tool for cross-culture communication in the workplace and to generally describe the effects of society's culture on the value of its members and how these values reflect on the member's behavior. Individualism vs. collectivism measures the "degree to which people in society are integrated into groups. Countries that score high on this dimension are highly individualistic while countries that score low on this dimension are collectivistic. Both China and Egypt scored low on this dimension (China scored 20 and Egypt scored 25) while America scored extremely high (91) on this dimension. With China and Egypt almost scoring the same, it is justifiable to say that both Chinese and Egyptian people will think about the opinion or beliefs of their valued others when forwarding certain electronic viral messages while American youth will not take into account their social frameworks when forwarding certain electronic viral messages.

In a study done by (Pousttchi and Wiedemann, 2006) in the mobile marketing context, 70% of the 44 experts confirmed that message recipients' who receive mobile viral content from someone in their social circle are more likely to participate in the mobile marketing campaign and are more likely to forward the mobile viral content because they find promotional messages sent by known contact are more credible and significant than messages sent directly by commercial advertisers. A possible explanation for this is that promotional messages sent by commercial advertisers are not trusted because most people perceive commercial advertisers as money-driven and will do anything to get money out of the customers and therefore, they classify their messages as "spam". It is important to take into account that mobile viral marketing depends on viral messages circulating within a social framework for successful mobile marketing campaigns. Lastly, it is important to note that there are limited studies involving the TPB and mobile viral marketing. Therefore, it is difficult to confidently claim that the strong subjective norm may be unique to mobile viral marketing context or is cultural dependent.

## **7. Theoretical Implications**

One prominent and intriguing theoretical finding of the study is the strong role of subjective norm in predicting the university students' behavioral intention in forwarding the mobile viral messages. This finding contradicted previous meta-analyses studies and raised an important theoretical question: is this finding unique to mobile viral marketing context and the TPB or is there more theoretical implications to the role of subjective norm in the TPB not yet highlighted upon. In this study, the strong predictive power of subjective norm was tied to the cultural context of the study. Theoretically, this may indicate that the TPB does not function the same way in all mobile viral marketing context and TPB studies and it may depend on the context or atmosphere of the study with respect to the research tools used. There may be also ambiguous variables that could be influencing behavioral intention in the context of mobile viral marketing not yet discovered. While this study was framed around the classic TPB, other theories may have been able to offer insight in the mobile viral marketing context. For example, (Palka et al., 2009) used a grounded theory approach towards mobile viral marketing because research on mobile viral marketing is rare. Palka et al. (2009), first formulated a basic model that illustrated the typical mobile viral marketing process, then they formulated three partial models (the receipt, usage and forwarding model) that collectively work together to explain influences on consumer behavior in mobile viral marketing. There were also scholars who used other theories that provided interesting insight on the role of subjective norm and its effect on behavior. For example, (Thorbjørnsen et al., 2007) tested the extended version of the TPB by incorporating self-identity expressiveness and social identity expressiveness in the context of multimedia messaging services

(MMS). (Thorbjørnsen et al.,2007) incorporated these two variables because they argue that concepts related to social and identities are crucial in understanding the adoption of new technological services.

### **7.1 Practical Implications**

There are several important implications for mobile marketers found in this study. First, the study confirmed the impact of subjective norm on young Egyptian university students' viral attitude and intention to forward mobile viral marketing messages. This is an opportunity for mobile marketers because if millennial consumers start forwarding mobile viral marketing messages to important others in their social circle and consider it socially acceptable to forward such messages, mobile viral marketing will then gain more significance as it will become a social norm among consumers. Therefore, mobile marketers need to engage in promotional strategies and tactics to encourage consumers to pass mobile marketing messages more. For instance, one common strategy with proven success is the use of incentives in the form of mobile promotions and coupons. The study also concluded that respondents are more likely to forward electronic viral messages if they are entertaining, and useful, therefore, mobile marketers should be keener in making sure that their mobile marketing campaigns are entertaining, useful, and relevant to target audience in terms of their values or beliefs. Moreover, mobile marketers can ensure a successful mobile viral marketing campaign if they stress in their electronic viral messages to their young consumers that their important friends or relatives in their social circle will benefit if they send them the promotions. Another way to ensure success for the mobile viral marketing campaign is to make sure it coincides with the personal interests of young millennial consumers in terms of fashion trends, idols and sporting team, for instance. In conclusion, the mobile marketer should exert effort in marketing research to collect data and understand the mindset of their target consumers and important others in their social circle relatively well. It is recommended that the mobile marketer should refer to social networking sites, such as Facebook or Twitter, to collect such data inexpensively and quickly.

### **Conclusion**

The findings of the study have contributed to the effort of constructing a comprehensive model that will be able to predict university' students mobile viral marketing attitude, intention and behavior in the Egyptian context. All three predictor variables (attitude, subjective norm and perceived behavioral control) along with behavioral intention contributed to the predictive power of the theory. The usefulness of this theory depended on correct operationalization and measurement of the predictor variables (attitude, subjective norm and perceived behavioral control), behavioral intention and behavior.

The findings has extended the literature and supported the results of previous studies (Schulze and Wittmann,2003; Armitage and Conner, 2004; Tsang et al., 2004; Bauer et al., 2005; Lee et al., 2006; Muk and Babin, 2006; Pavlou and Fygenson, 2006; Thorbjørnsen et al., 2007; Zhang and Mao, 2008; Shen and Chen, 2008; Wong and Tang, 2008; Anzam ,2011; Yang and Zhou,2011; Knabe, 2012, Yang and Zhou, 2012). However, the theory could have further been enriched with variables from other competing theoretical frameworks including the Palka et al.'s (2009) three partial models, Technology Acceptance Model (TAM), identity and social identity theory.

Even though the TPB has been proven effective over the past two decades in multi-disciplinary studies that stretch over the landscapes of many contexts, it has been recently tested in the emerging field of mobile viral marketing. Applying the theory was useful and insightful given the mounting growth of mobile marketing and that very little is known about the attitude, intention and behavior of consumers engaged in this new marketing tool.

Cross-culture studies should be conducted to compare and contrast between the mobile viral forwarding behavioral patterns across cultural landscapes since little statistical correlations have been reached regarding the relationship among certain cultural traits when it comes to mobile

viral forwarding behavior. Future studies that consider the different cultural bases of countries will benefit international mobile marketers by giving them appropriate strategies and tactics to target desired respondents in desired countries. Future studies could also be specific to certain industries such as banking, tourism, travel, food and automobile to outcomes of such studies can benefit mobile marketers' specific to those industries.



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