

LEVELS OF FACEBOOK USE: EVIDENCE FROM EGYPT

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ABSTRACT

This study aims to explore the factors which discriminate between the use at different levels of the social media in Egypt. Facebook will be the focused of this research, as a particular application of the social media. The study will divide Facebook users on the basis of three groups of factors, namely, Internet experience, psychographics and satisfaction and will relate these factors to three levels of Facebook use: heavy, moderate and light. A sample of 384 users was drawn from the Facebook users in Egypt. Data were analyzed using Structural Equation modelling; the findings indicate that Internet experience, Internet lifestyle and satisfaction are the significant determinants of one's level of Facebook use.

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KEYWORDS: Social Media, Facebook, Segmentation, Level of use, Egypt.

INTRODUCTION

Social network sites (SNSs) are quickly becoming the most popular tools for social communication (Ross et al., 2009). In such applications as Facebook, more than 400 million active users visit it frequently and use it as their main communication tool (Alarco'n-del-Amo et al., 2011). However, the success of any social network application does not depend merely on how many members use it, but on the extent to which they do so (Jin et al., 2009). The adoption of a specific SNS platform does not necessarily imply continued and increasing use of the platform. Moreover, the literature on information technology acceptance indicates that complex innovations such as the Internet and its products, notably the SNSs, are considered to be "multi-level phenomena" and their adoption and use involve more levels than the simple indications of "do use" and "do not use" (Huizingh and Brand, 2009).

Nevertheless, the levels of use of SNS and the factors which motivate or hinder the heavy use of SNSs are still unknown. Previous studies about the adoption of SNSs have focused on the factors which motivate people to adopt them (Richter et al., 2011) and on the way in which people use them. For example, Ross et al. (2009) discuss the way in which personality factors and competence may lead to the use of more features of Facebook, such as commenting on or sharing, than other attributes do. The current heterogeneity in users of SNSs is not reflected in the literature. Specifically, when a new technology-based product or process is still in the early stages of diffusion as Facebook use is in the Middle East, it may be inaccurate and inappropriate to treat all users as a homogeneous population. Therefore, it may be helpful to explore the levels of adoption of SNSs and to discriminate more clearly the factors which distinguish these levels. In addition, the existing literature seems to have looked into SNS use only among university students; thus the knowledge about the adoption and use among other age groups remains limited (Richter et al., 2011). Moreover, research so far has concentrated on users in a Western context, while some preliminary results in other contexts suggest that the culture of a different country may cause different patterns of adoption (Choi, 2006; Fogg and Lizawa, 2008; Vom Brocke et al., 2009).

Against this background, the existing literature cannot discriminate well enough between levels of adoption and/or use, or to link these with user population and geographical context. This limitation may limit the identification of more general patterns across different contexts or the specifics of SNS in a certain context. Therefore, this study will attempt to address these gaps through developing and testing a

theoretical model which identifies the factors differentiating between levels of use of Facebook and relate these factors to the three different levels of use named above, as depicted in Figure 1. This paper is organized as follows: first, a synthesis is presented of the available literature about the adoption of innovation and levels of use of innovation. Then, the research method is discussed. Finally, the results, discussion and suggestions for future research are presented.

LITERATURE REVIEW AND HYPOTHESES

This research uses Roger's model of innovation adoption (Rogers, 2003) as the basic theoretical framework guiding the model's development. The research model of this study is a synthesis of Roger's framework along with previous literature on social media adoption and also its induction. Rogers's model is based on the innovation-decision process which is "the process through which an individual (or other decision-making unit) passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea and to confirmation of this decision" (Rogers, 2003, p. 170). According to Rogers (2003), consumer characteristics, attitude and personality affect the rate of adoption of innovations. In addition to Roger's model of innovation adoption, factors such as satisfaction and motivations are included in the model since they have proven in the previous literature to be significant factors affecting the levels of web and social media adoption.

Unlike Roger's model, the proposed conceptual framework will not only study the adoption/non-adoption dichotomy but will also gauge the level of adoption. Thus, the model studies the five main factors under three key themes, namely, Internet experience, psychographics and satisfaction as the key factors affecting the level of Facebook use, at three possible levels: low, medium and high level use.

Lifestyle

Most studies which use psychographics to describe Internet use have focused on different types of web shopper. Few studies have used psychographics to profile Internet users in a non-shopping context. Assael's (2005) study represents one of these few; it attempts to examine and provide a detailed description of both the lifestyle of heavy web users and the types of web use. He finds that lifestyle variables helped to determine the type and level of web use. Heavy users were found to have a more favourable opinion of the Internet, were more likely to engage in various Internet activities and were more likely to buy items listed on the web. They also had more liberal social views, had optimistic views of the future and were self improvers. In this study, the lifestyle variables chosen were tailored from a scale previously used and tested by Swinyard and Smith (2003) which looks extensively into the lifestyle attributes distinguishing online shoppers and clusters them into four groups according to these lifestyle variables. These scales, however, are tailored to fit the specific purpose of determining the typology of social media users and to relate this typology to the level of use of the social media use. It is expected that:

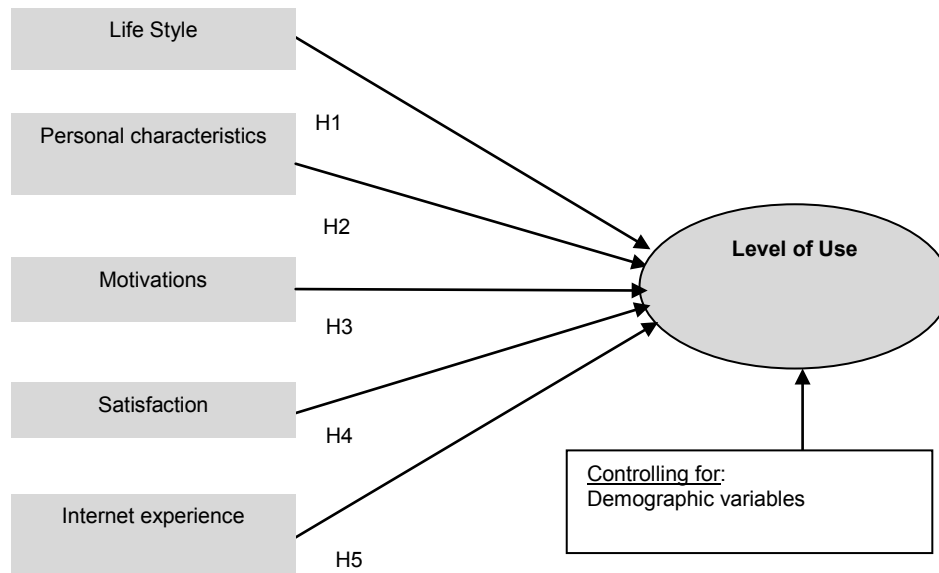
H1 Lifestyle variables can help distinguish the different levels of Facebook use

Personal Characteristics

Personal characteristics have commonly been studied as part of psychographics in the previous research on social media. Few studies have focused on the effect of personality factors on specifically social media use (Ross et al., 2009). In the present research it was seen as important to study personal characteristics separately, since it was thought that these factors, which are different from lifestyle and benefits acquired, the other elements of psychographics, would help greatly in segmenting Facebook users. Thus it was seen as important to measure their effect separately. This research relied on a framework adopted by Schutz (1966), who proposed a three-dimensional theory of interpersonal behaviour which he called FIRO

(fundamental interpersonal relations orientation). He proposed that people engage in interpersonal communications because they are interested to express one of three interpersonal needs: inclusion (the need to be part of a group/need for attention), appreciation (the wish to show affection/concern for others) and control (the need to exert power in one's social environment).

Figure 1: Research Framework



This figure shows the research framework that identifies the proposed independent variables that discriminates between levels of Facebook use

Five personal characteristics were tailored from this FIRO theory, namely; need to belong, personal growth, individuation, curiosity and exploration and helpfulness. According to Bausmeister and Leary (1995), human beings feel “a need to form and maintain at least a minimum quantity of interpersonal relationships”. Krasnova et al. (2008), by applying human needs theory, find that both the need for belongingness, through connection with others and for esteem, through self-presentation, are two important drivers for SNS usage. Chan and Misra (1990) introduce the concept of individuation to the opinion leadership literature and propose that the act of forwarding online content to others in the same network allows people to differentiate themselves. Shutz (1966) proposes that people who have an intense need for personal growth want to make a difference in their social environment and also to have a say in making this difference. Whiting and de Janasz (2004) provides evidence that students were able to successfully use email for networking and for building and nurturing business relationships to aid them in their future career and personal success. Curiosity is defined as the desire to know or learn (Kashdan et al., 2004). It is thought that people with higher levels of curiosity are more likely to consume online content (Ho and Dumsey, 2011). Finally, in respect of helpfulness it is proposed that some people share information with others as a means of expressing love or friendship (Dichter, 1966).

Additionally, evidence from the word of mouth literature provides support for the notion that people are driven by altruistic reasons in both offline and online environments (Phelps et al., 2004). Moreover, Ross et al. (2009) find that people who are highly extroverted are more likely to use Facebook as a social tool but not as an alternative to social activities. Personal characteristics were measured using previously available scales (Leary et al., 2001; Maslach et al., 1985; Robitscheck, 1998; Price et al., 1995 and Kashdan et al., 2004). It was expected that personal characteristics would help us better understand the typology of Facebook users, as well as the level of Facebook use. Thus:

H2 The variable of personal characteristics can help distinguish the different levels of Facebook use

Motives

Uses and gratifications (UG) theory attempts to explain how people use the media to gratify their wants and needs, what motivates their behaviour and what the consequences are of their uses of the media. With the advent of the Internet, this perspective seems even more relevant. Audiences undoubtedly play an active role in the messages which they receive from the Internet because, in order to find information, they must actively seek it out (Bumgarner, 2007). People have different reasons for using the social media, derived from the benefits they seek to gain. Most of the research tackling motives has focused on the benefits sought from the use of the social media and studied these as part of psychographics. Bumgarner (2007) points out that Facebook is used by students to stay in contact with old friends, to make contact with co-students, romantic partners or similar, but that Facebook is most prominent as a medium designed for the exchange of gossip. Other studies show that the maintenance of contacts with old friends and intensification of links with co-students were the two main motives behind using SNSs (Lampe et al. 2006; Raacke and Bonds-Raacke 2008; vom Brocke et al. 2009a). Lampe et al. (2006) discusses the need for social searching as an important SNS pattern in students' use. Social searching involves using SNS to find out more about newly made offline contacts, such as fellow-students whom one has met in class (Lampe et al. 2006).

Most of the studies on motives for the use of the social media have focused on students as the target of analysis. Limited research has examined the motives of other user groups. Schaefer (2008) has studied the motives of professional users and identified three major motives in this context, staying in contact, reactivating contacts and, most importantly, managing one's existing contact-network. In their study of the motives behind participation in online communities, Richter et al. (2011) find that connecting with each other turned out to be the most significant of all the factors studied. In his study on the motives behind blog use, Hollenbaugh (2011) finds that social connectedness, helping/informing and getting feedback turned out to be among the most important motives. Passing the time and reducing boredom were also found as motives in the use of other media, including the Internet (Ebersole, 2000; Papacharissi and Rubin, 2000). The scale used in this research was newly developed by drawing on the multiple factors present in the previous Internet literature. It was expected that the motives behind Facebook use could help determine the typology of Facebook users and could help distinguish the different levels of their use of it. Thus:

H3 Motives can help distinguish the different levels of Facebook use

Customer Satisfaction

Satisfaction is an important construct in the information system literature. End user satisfaction is critical to the successful implementation of information systems (Ong and Day, 2010). Satisfaction in a given situation is the sum of a person's feelings or attitudes toward a variety of factors affecting that situation (Olson and Baroudi, 1983). User satisfaction is defined as the extent to which users believe that the information system available to them meets their information requirements (Olson and Baroudi, 1983). Ong and Day (2010) define satisfaction with the social media as "a user's overall emotional feelings about his use of social media." Thus, satisfaction refers to the extent to which respondents have a positive attitude towards what they have achieved by using e-commerce. Satisfaction is often defined as what you have achieved compared to some yardstick, where the yardstick can be anything from expectations, competitors, best practice companies, to investments and the like. Research results indicate that individuals will continue to use the information in a computer-supported social network when they are satisfied with their previous use of it and when they perceive that the information in the network is useful (Jin et al., 2009). In the present study satisfaction was measured on scales which were already available

scales to indicate whether a user likes or dislikes the idea of using Facebook and whether he/she feels that his/her objectives in using the social media were met. It was also thought that users who were more satisfied with Facebook use were more likely to engage in higher levels of use. Thus,

H4 Satisfaction can distinguish the different levels of Facebook use

Internet Experience

Internet experience has been commonly used to indicate the length of time that users have been using the Internet (Cheema and Papata, 2010). It has been demonstrated that Internet users who have been using the Web for a longer time are more likely than others to use it for more task-oriented activities, such as shopping (Hammond et al., 1997; Novak et al., 2000). In this study Internet experience refers to a person's length of experience of using the Internet, the frequency of this use, the time spent in online sessions and also the kinds of activity carried out on the Internet. It was expected that Internet experience would help distinguish the different levels of Facebook use, whereby more experienced users were expected to reveal higher levels of Facebook use. Thus:

H5 the length of Internet experience helps distinguish the different levels of Facebook use.

Demographic Variables

Demographic variables, such as age, gender, income, education, occupation and the like have been commonly used in research as a main segmentation basis of customers, since these variables represent data which is easy to collect and readily available. Demographic variables have been used in particular to segment online shoppers from non-shoppers (Swinyard and Smith, 2003). Research also focused on discriminating between users and non-users of the Internet, on the basis of these demographic variables (Hindman, 2000). Research results, however, were not consistent in terms of the findings related to the significance of these variables with regard to segmenting online users from non-users and whether these were the most important factors to consider when segmenting online users. In this research we controlled for the effect of these variables, as we wanted to examine whether other factors such as Internet experience, personality characteristics, satisfaction and lifestyle could help us better understand the differences between social media users and whether they could help us to distinguish the different levels of use which users exhibit.

METHODOLOGY

This research used a mixed methods approach to test the proposed model. The study is primarily quantitative, but contains a qualitative element in the form of in-depth interviews, which were conducted at the outset in order to gain a better understanding of the phenomenon under study. The study began with 21 in-depth interviews with an unstructured format, conducted to understand the motives of Egyptians in using SNSs (e.g., Facebook, Twitter). Specifically, the interviews focused on identifying the motives behind the heavy or light use of Facebook. The findings from these interviews helped determine the research constructs and their relationships. Next, a large-scale survey was conducted.

There were 6,484,700 users of Facebook in Egypt in 2011 between 16 and 64 years old (Facebook, 2011). The research focused only on the Cairo area because 43% (2,892,620 million users) of the Facebook users live in Cairo. The sample size was 384 users. Sample size was determined from the statistical tables developed by Krejcie & Morgan (1970) in view of the following criteria: population size, 2,921,460 (CAPMAS, 2011), confidence interval of $\pm 5\%$, confidence level of $\pm 95\%$, ratio of population characteristics available in the sample, 50%.

Data were collected via an online field survey of Facebook users over a period of three months from September through December 2011. To collect the data, we used search engines provided by Facebook. Search engines usually allow users to be searched by location, high school, college or employer. Although the data collected would probably have some selection bias, it was impossible to select a random sample of users given that a complete directory of Facebook users does not exist. Previous similar studies have also conducted online surveys through convenient samples (Li, 2011). Invitation messages, which contained the URL of the online questionnaire, were sent to the selected respondents through the messaging function of Facebook. Over the three-month period of the survey, 279 usable questionnaires were generated. The measurement items used to operationalize the constructs were derived from previous studies and the wording of the items was adjusted to match the present context. New items were added when necessary. All items were measured on a five-point Likert scale, from 1: “strongly agree” to 5: “strongly disagree”. Table 1 provides a description of the sample. The items were originally written in English but were then translated to Arabic to suit the context of study. To obtain a good level of translation, a back-translation was conducted. The Arabic and English versions of the questionnaire were reviewed by three linguists to ensure that both versions were comparable at a high degree of accuracy. Table 1 provides the sample distribution.

Table 1: Sample Description

Measures	Items	Frequency	Percentage (%)
Age	16-24	120	43.2
	25-29	97	34.6
	30-34	52	18.8
	35 or more	10	3.4
Gender	Female	140	50.1
	Male	139	48.9
Education	High school or equivalent	156	70.6
	Undergraduate	23	10.5
	Postgraduate	42	19.0
Marital Status	Single	187	55.9
	Married with no children	39	13.9
	Married with children	52	18.6
	Single parent family	1	0.00
Employment	Not employed	43	15.4
	Academic	23	0.08
	Professional	41	14.6
	Administrative	86	30.8
	Self employed	17	0.06
	Student	71	25.4
Internet Experience	≤ 1 year	12	0.04
	≤ 5 years	53	18.9
	6 to 10 years	122	43.7
	> 10 years	92	32.9
Experience in using Facebook	Rarely	19	0.06
	Once every couple of months	21	0.07
	At least once a week	21	0.07
	Several times a week	176	63.0
	At least once a day	25	0.08
	Several times a day	7	0.02

This table shows the characteristics of the sample; the 279 Facebook users in Egypt. All numbers indicate frequency and percentages.

RESULTS

Level of Facebook Use

Two variables were used to describe the level of Facebook use, that is, frequency of Facebook usage (i.e., rarely, once every couple of months, at least once a week, several times a week, at least once a day, several times a day) and type of Facebook activities conducted (i.e., the frequency with which an

individual engages in Facebook activities such as sharing, commenting, or uploading photos/videos which ranges from 1 = “rarely” to 5 = “often”). An index to show the level of use of Facebook was developed accordingly, by multiplying the frequency of Facebook use by the relative frequency of Facebook activities (calculated by dividing the average frequency of Facebook activities per respondent by the total sum of the listed frequencies). Accordingly, the respondents were divided into three groups based on their index scores: light, moderate and heavy Facebook users. Specifically, if respondents scored less than 2 on the index, they were rated light Facebook users; if they scored between 2 or more and below 4, they were rated moderate Facebook users; and if they scored 4 or more, they were rated heavy Facebook users. Table 2 describes these different groups of Facebook users. The Kruskal-Wallis test was used to measure if the three groups significantly differed and the results ($\chi^2(2) = 188.963, p < 0.01$) indicate that the difference between the groups is statistically significant.

Table 2: Level of use of Facebook Groups

Groups of Facebook Users	Level of Use of Facebook Index*	
	Frequency	%
Light	72	25.8
Moderate	102	36.5
Heavy	105	37.7

*This table describes the three groups of Facebook users, grouped according to their level of use of Facebook into: light; moderate and high. . * Indicate that the groups are significantly different at 0.01 levels*

The Measurement Model

Structural equation modelling was used to test the research model using LISREL 8.7. A confirmatory factor analysis (CFA) was first conducted. The model fit is assessed in terms of four indices: comparative fit index (CFI), goodness-of-fit index (GFI), root mean square error of approximation (RMSEA) and the consistent AKaike information criterion (CAIC). A model is considered to be satisfactory if CFI > 0.95, GFI > 0.90 and RMSEA < 0.06 (Hair et al., 2010). CAIC has no cut-off values; instead, a smaller value implies better fit. The results of CFA indicated that the initial measurement model did not fit the data well [$\chi^2(623) = 1.735$; CFI = 0.91; GFI = 0.84; RMSEA = 0.056; CAIC = 2.656.20]. A careful inspection of the LISREL output revealed that some items did not load on the designated latent factors (completely standardized loading < 0.60). To refine the measurement model, some items were dropped from ILS, NDBG, CUR and HLP. With the remaining items, another CFA was conducted. Compared with the initial model, the new measurement model exhibited improved model fit [$\chi^2(382) = 1.049.40$; CFI = 0.94; GFI = 0.87; RMSEA = 0.051; CAIC = 1.852.49]. Table 3 describes the new measurement model.

In addition to the model fit, the reliability convergent validity and discriminant validity of the scale were all tested. Reliability was examined on the basis of CR and AVE. A scale is said to be reliable if CR > 0.70 and AVE > 0.50 (Hair et al., 2010). As indicated in Table 3, the CRs and AVEs are more than the cut-off values. Convergent validity is met if all item loadings are equal to or above the recommended cut-off value of 0.60 (Hair et al., 2010). It was found that the loadings range between 0.60 and 0.92, suggesting the convergent validity of the scale. Discriminant validity is the extent to which an item does not relate to the measures of other constructs. Discriminant validity is achieved if the square root of the AVE is greater than the correlation coefficients (Hair et al., 2010). It was found that all the correlation estimates met the criterion. Overall, the evidence of a good model fit, reliability, convergent validity and discriminant validity indicates that the measurement model was appropriate for testing the structural model at a subsequent stage.

Table 3: Estimated Factor Correlation Matrix from the Revised Measurement Model

	Correlation Matrix																
	Mean	SD	CR	AVE	1	2	3	4	5	6	7	8	9	10	11	12	13
1. WEB1	4.2	1.7	0.81	0.55	0.87												
2. WEB2	2.5	1.4	0.86	0.57	0.17	0.83											
3. ILS1	2.3	1.0	0.95	0.64	0.28	0.18	0.78										
4. ILS 2	4.2	0.9	0.80	0.58	0.46	0.28	0.27	0.76									
5. ILS 3	3.1	1.2	0.90	0.66	0.38	0.26	0.28	0.29	0.83								
6. ILS 4	2.2	1.1	0.81	0.59	0.31	0.36	0.46	0.28	0.43	0.82							
7. ILS 5	3.6	1.3	0.85	0.61	0.41	0.31	0.30	0.22	0.33	0.36	0.90						
8. PG	2.1	0.7	0.82	0.60	0.11	0.21	0.32	0.41	0.21	0.44	0.20	0.91					
9. NDBG	3.5	1.1	0.75	0.54	0.22	0.11	0.40	0.21	0.25	0.20	0.24	0.36	0.88				
10. INDV	3.2	0.8	0.80	0.65	0.13	0.22	0.11	0.21	0.33	0.29	0.24	0.34	0.21	0.92			
11. CUR	2.2	1.0	0.89	0.71	0.14	0.13	0.20	0.32	0.40	0.24	0.13	0.23	0.13	0.24	0.71		
12. HLP	4.1	0.9	0.80	0.81	0.30	0.14	0.23	0.41	0.43	0.33	0.17	0.25	0.16	0.13	0.20	0.76	
13. SAT	3.6	1.2	0.76	0.63	0.23	0.31	0.14	0.19	0.23	0.30	0.29	0.24	0.25	0.10	0.24	0.43	0.73

This tables shows the means, standard deviation (SD), composite reliability (CR) and Average Variance extracted (AVE) of the estimated factors. WEB = Internet experience; ILS = Internet Life Style; PG = Personal Growth; NDBG = Need to Belong; INDV = Individuation; CUR = Curiosity; HLP = Help; SAT = Satisfaction; Value on Diagonal is the square root of AVE

Structural Model and Research Hypotheses

Logit regression using LISREL 8.7 was used because the dependent variable – the level of use of Facebook – is a categorical variable which covers three categories; light (1), moderate (2) and heavy (3). The final model included 13 factors which represented the four independent variables in the research model. The factors were represented in the model, with their latent scores. As shown in Table 3, the results reveal that Internet experience includes two factors: the first one reflects experience of Internet browsing and emails, while the other factor reflects experience of Internet searching. Moreover, the results reveal that there are five Internet lifestyle factors; i.e., entertainers (those who use the Internet to satisfy their hobbies and cultural interests), socialisers (those who use the Internet to stay in contact with family and friends); doers (those who use the Internet to promote ideas and causes); tech-experts (those who surf the Internet to get information about technological gadgets and Internet technologies) and non-tech (those who find it hard to work out how to use Internet technology). Moreover, individuation, the need to belong, personal growth, curiosity, helpfulness and satisfaction were each represented by one factor. Finally, the model included the three motives highly ranked by respondents along with some demographic variables (age, gender, employment and marital status) as ordinal variables. Accordingly, the following logit regression equation was estimated, to identify the determinants of the level of Facebook use; the results are shown in Table 4.

$$\text{INDEX} = 0.752 \cdot \text{ILS2} + 0.612 \cdot \text{ILS5} + 0.525 \cdot \text{SAT} + 0.534 \cdot \text{WEB2} - 0.342 \cdot \text{AGE} + \text{Error}, R^2 = 0.623$$

Fit indices indicate that the model is a good fit of the data [$\chi^2(290) = 574.75$; CFI = 0.95; GFI = 0.92; RMSEA = 0.047; CAIC = 1.399.16]. Furthermore, the model explained a fair amount of the variance in the outcome variable; that is, it explained 62.3% of the variance in the level of use of Facebook. We found that only hypotheses 1, 4 and 5 were supported. In support of H5, Internet-related experiences have a significant positive effect on the level of Facebook use ($\beta = 0.534, p < 0.01$). In addition, there is a significant positive relationship between the level of use and only two Internet lifestyles; i.e., “keeping in contact with family and friends” ($\beta = 0.752, p < 0.01$) and “being a tech expert” ($\beta = 0.612, p < 0.01$) (this, H1 is supported). Furthermore, there is a significant positive relationship between satisfaction and the level of use of Facebook ($\beta = 0.525, p < 0.05$) (H4 is supported). Finally, we found an effect exerted by some of the control variables on the level of use of Facebook. Specifically, age ($\beta = 0.34, p < 0.05$) was negatively related with the level of use of Facebook.

Table 4: Adjusted t-statistics and Standardized Path Coefficients for Hypothesized Paths in the Logit Regression Model

Hypothesis	Path coefficient (t-value)	Supported
H1: Lifestyle to level of use		
ILS1 → level of use	0.124	--
ILS 2 → level of use	0.752**	√
ILS 3 → level of use	0.201	--
ILS 4 → level of use	0.121	--
ILS 5 → level of use	0.612**	√
H2: Personal characteristics to level of use		
PG → level of use	0.234	--
NDBG → level of use	0.152	--
INDV → level of use	0.021	--
CUR → level of use	0.011	--
HLP → level of use	0.014	--
H3: Motives to level of use		
MOT1 → level of use	0.146	--
MOT2 → level of use	0.103	--
MOT3 → level of use	0.210	--
H4: satisfaction to level of use		
SAT → level of use	0.525*	√
H5: Internet experience to level of use		
WEB1 → level of use	0.023	--
WEB2 → level of use	0.534**	√
H6: Demographic Variables		
AGE → level of use	0.342*	√

This table shows the adjusted t-statistics and standardized path coefficients for hypothesized paths in the logit regression model. **, indicates significance at the 0.01, 0.05 levels respectively, √ indicates that hypothesis is supported and -- indicates that hypothesis is not supported
 WEB = Internet experience; ILS = Internet Life Style; PG = Personal Growth; NDBG = Need to Belong; INDV = Individuation; CUR = Curiosity; HLP = Help; SAT = Satisfaction, MOT = Motivation

DISCUSSION

This study proposed a model to understand and explain the level of use of social networks. The findings suggest that Internet experience, Internet lifestyle and satisfaction are the significant determinants of the level of use of Facebook. With regard to Internet life style, only two factors, namely, being a socializer and being a non-tech, out of the five factors studied, turned out to be significant in distinguishing between the different levels of Facebook use. One possible explanation is that, since the main purpose of Facebook use is to interact with others, users who believe that the Internet in general and Facebook in particular are effective media for communicating and interacting with others, for example, their family members and friends, will be active in using Facebook compared to those who do not use the Internet nor believe that it is an effective medium for interaction and socializing. This result is consistent with other studies (e.g., Bumgarner, 2007), which find that staying in contact with family and friends is the main motive for using Facebook. Another important result here is that Internet experience and the Internet lifestyle of being a “non-tech” discriminate between levels of Facebook use.

This indicates that having adequate Internet experience and skills is necessary to be active on Facebook, or, in other words, that users who have high computer skills and considerable Internet experience will use Facebook more than others who lack these experience and skills. This is perhaps because their experiences and skills enable them to find the material they want to share with family and friends or to express opinions. Furthermore, satisfaction was found to be a discriminating factor between the levels of Facebook use. This result supports the results of Lu and Hsiao (2007) and Jin et al. (2009). This is perhaps because when people are satisfied with the results of their behaviour of using a specific technology, they will continue to use it, whereas if they are not satisfied, they will either reduce their level

of use or in some cases stop using the technology altogether. This result is consistent with the results of Ong and Day (2010) and Jin et al. (2009). Finally, with regard to demographic variables, it has been found that age alone is the significant variable which discriminates between levels of Facebook use; younger users are more active than older users of Facebook. This result is consistent with the notion that social network sites tends to have a younger population in general (Li, 2011).

CONCLUSION

This research aimed to study the factors which discriminate between different levels of Facebook use in Egypt. The findings indicate that Internet experience, Internet lifestyle and satisfaction are the significant determinants of one's level of Facebook use. If this is so, it may be concluded that in order to increase the level of use of Facebook, the medium should strive to provide or enhance the features which support social ties with family and friends. For example, Facebook should allow users to customize the news feed when opening home (Engblom, 2010). It should also enhance group news feed (Constine, 2010) and enable users to create a new list or to search for friends in a geographical area and then select which ones should be added to their list of friends (Engblom, 2010). In addition, it is apparent from the findings that the level of Facebook use is related to people's level of satisfaction with their experience of using it. Thus, Facebook should focus on improving its features, as well as simplifying the navigation process, which includes strengthening the photo viewer applications (LeClair, 2011), enabling invitation to be sent to all friends at once without incurring a spam warning, including voice and video chat and enabling users to drag and drop files, photos and videos (Engblom, 2010).

All these features and others are expected to add more appeal, diversity and usability to Facebook, which could indeed be expected to enhance the level of its use. A limitation of this research is that it focuses on a specific context; thus possibly hindering the generalizability of the results. Future research could make a cross cultural analysis by applying the framework used here to another country allowing results of this research to be compared in terms of whether the same factors turn out equally significant and the framework to be generalized to different cultures. Additionally, having found that different factors affect the different levels of Facebook use, future studies could attempt to develop better ways of measuring levels of use by identifying the factors which affect the different levels of use and developing hypotheses to reflect these differences in determining the levels of social media use, thus resulting in a set of hypotheses for each of the different levels under study.

REFERENCES

Alarco'n-del-amo, M., lorenzo-romero, C., and Go'mez-borja, M. (2011) "Classifying and profiling social networking site users: a latent segmentation approach", *Cyberpsychology, behavior, and social networking*, vol. 14(9), p.547-53.

Assael, H. (2005). "A demographic and Psychographic Profile of Heavy Internet Users and Users by Type of Internet Usage." *Journal of Advertising Research*, March, p. 93-123.

Bausmeister, R. and Leary, M.(1995). "The Need to Belong: Desire for Interpersonal Attachments as a fundamental Human Innovation." *Psychology Bulletin*, vol. 117 (3), p. 497-529.

Bumgarner, B. (2007). "You have been poked: exploring the uses and gratifications of Facebook among emerging adults," *First Monday*, vol. 12(11)

CAPMAS, (2006/2007), Census Data 2006/2007 reports, Central Agency for Public Mobilization and Statistics (CAPMAS), http://www.capmas.gov.eg/pages_ar.aspx?pageid=544 (accessed at June 25th 2011)

- Chan, K. and Misra, S. (1990). "Characteristics of the Opinion Leader: A New Dimension." *Journal of Advertising* 19 (3), p. 53-60.
- Cheema, A. and Papata, P. (2010). "Relative Importance of online versus offline information for Internet Purchases: Product Category and Internet experience effects." *Journal of Business Research*, vol. 63, p. 979-985.
- Choi, J. (2006). Living in CyWorld: Contextualising cy-ties in South Korea. In: Bruns A, Jacobs J (eds) *Use of blogs (digital formation)*. Peter Lang, New York, p.173-186
- Chung, C. and Darke, P. (2006). "The consumer as advocate: self reference, culture and word of mouth." *Marketing Letters*, vol.17 (4), p.269-279.
- Constine, J. (2010). How Facebook Groups Integrates With Other Core Apps: News Feed, Events, Mobile, retrieved from <http://www.insidefacebook.com/2010/10/06/groups-integrates-core-apps/> (last accessed at 12/12/2011)
- Dichter, E. (1966). "How word-of-mouth advertising works." *Harvard Business Review*, vol. 44 (November-December).
- Ebersole, S. (2000). "Uses and gratifications of the web among students." *Journal of computer mediated communication* 6. In Hollenbaugh, E. 2011. "Motives for maintaining personal journal blogs." *Cyberpsychology, Behavior and Social Networking*, vol. 14, p. 1-2: 13-20.
- Engblom, G. (2010). 25 improvements suggested to Facebook, Retrieved from <http://www.kolibriexpeditions.com/birdingperu/blog/index.php/25-improvements-suggested-to-facebook/> (last accessed at 12/1/2011)
- Facebook (2011). Advertise on Facebook, <https://www.facebook.com/ads/create/> (last accessed 12/10/2011)
- Fogg, B., and Iizawa, D. (2008). "Online persuasion in Facebook and Mixi: a cross-cultural comparison," *Lecture Notes in Computer Science* 5033, p.35-46
- Hair, J., Black, W., Babin, B. and Anderson, R. (2010). *Multivariate Data Analysis*, 7th edition, Prentice Hall, New Jersey.
- Hindman, D. (2000) The rural-urban digital divide, *Journalism and Mass Communication Quarterly* vol. 77(3), p. 549
- Ho, J. and Dumsey, M. (2011). "Viral Marketing: Motivation to forward online content." *Journal of Business Research* vol. 63, p. 1000-1006.
- Hollenbaugh, E. (2011). "Motives for maintaining personal journal blogs." *Cyberpsychology, Behavior and Social Networking* vol. 14 (1-2), p. 13-20.
- Huizingh, E. and Brand, M. (2009). "Stepwise innovation adoption: a neglected concept in innovation research." *International Journal of Technology Management*, vol. 45, (3/4), p. 267-281.
- Jin, X., Cheung, C., Lee, M., Chen, H. (2009). "How to keep members using the information in a computer-supported social network", *Computers in Human Behavior*, vol. 25, p. 1172-1181
- Kashdan, T., Rose, P., Fincham, FD. (2004). "Curiosity and Exploration: facilitating positive subjective experiences and personal growth opportunities." *Journal of personal Assessment*, vol. 82, p. 291-305.

Krejcie, R. and Morgan, D., (1970) *Educational and Psychological Measurement*, 30, 607-610.

Lampe, C., Ellison, N., Steinfield, C. (2006). A face(book) in the crowd: social searching vs. social browsing. In: Proc 2006 20th anniversary conference on computer supported cooperative work. Banff: 167–170

Leary, MR., Kelly, KM., Cottrel, CA. and Schreindorfer, L. (2001). “Individual differences in the need to belong: mapping the nomological network.” Duke Univeristy, Department of Psychology, Unpublished Manuscript. In Ho, J. and Dumsey, M. (2011). “Viral Marketing: Motivation to forward online content.” *Journal of Business Research*, vol. 63, p.1000-1006.

LeClair, D. (2011). Facebook Announces Great Improvements to Photo Viewer, Retrieved from <http://www.makeuseof.com/tag/facebook-announces-great-improvements-photo-viewer-news/> (last accessed at 12/12/2011)

Li, D. 2011. "Online social network acceptance: a social perspective", *Internet Research*, vol. 21 (5), p. 562 – 580

Maslach, C., Stapp, J. and Santee, RT. 1985. “Individuation: conceptual analysis and assessment.” *Journal of Personal Social Psychology*, vol. 49 (3), p.729-738.

Novak, T., Hoffman, D. and Yung, Y. (2000). “Measuring the customer experience in the online environments: a structural modeling approach.” *Marketing Science*, vol. 19 (1), p. 22-42.

Olson, B. and Baroudi, J. (1983). “The Measurement of user information satisfaction.” *Communications of the ACM*, vol. (26), p. 785-793.

Ong, C. and Day, M. (2010). “An Integrated Evaluation Model of User Satisfaction with Social Media Services.” *IEEE*, August, p. 195-200.

Papacharissi, Z. and Rubin, AM. (2000). “Predictors of Internet use.” *Journal of Broadcasting and Electronic Media*, vol. 44, p. 175-196.

Phelps, J E., Lewis, R., Perry, D. and Raman, N. (2004). “Viral Marketing or electronic word of mouth advertising: Examining consumer responses and motivations to pass along email.” *Journal of Advertising Research*, vol., 44 (4), p. 333-348.

Price, L L., Feick, LF. Guskey, A. (1995). “Everyday Market Helping Behavior.” *Journal of Public Policy Marketing*, vol. 14 (2), p. 255-266.

Raacke, J., Bonds-Raacke, J. (2008). MySpace and Facebook: applying the uses and gratifications theory to exploring friend networking sites. *Cyberpsychology & Behavior*, vol. 11(2), p.169–174

Richter, D., Riemer, K., and vom Brocke, J. (2011). Internet Social Networking: Research State of the Art and Implications for Enterprise 2.0, *Business & Information Systems Engineering*, 2: 89 - 101

Robitscheck, C. 1998. “Personal Growth Initiative: the construct and its measure.” *Measures Evaluation couns Dev*, vol. 30 (4), p. 183-198.

Rogers, E.M. (2003). “Diffusion of Innovations.” 5th Ed. New York: The Free Press

Ross, C., Orr, E., Sasic, M., Arseneault, J., Simmering, M., Orr, R. (2009) “Personality and motivations associated with Facebook use,” *Computers in Human Behavior*, vol. 25, p. 578–586

Schaefer, C. (2008), Motivations and Usage Patterns On Social Network Sites, Retrived from <http://is2.lse.ac.uk/asp/aspectis/20080180.pdf> (last accessed at 18/02/2012)

Schutz, F. (1966). "A Thee Dimensional Theory of Interpersonal Behavior." New York: The Free Press.

Swinyard, W. and Smith, S. (2003). "Why People don't Shop Online: A lifestyle Study of the Internet Consumer." *Psychology and Marketing*, vol. 20 (7), p. 567-597.

VomBrocke, J., Richter D, and Riemer, K. (2009), Motives for using social network sites (SNSs) – an analysis of SNS adoption among students. In: Proc 22nd Bled eConference. Bled: 40–56

Whiting, VR. and de Janasz, SC. (2004). "Mentoring in the 21st Century: using the internet to build skills and networks." *Journal of Management Education*, vol. 28 (3), p. 275-293.

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