



**PREDICTING THE ADOPTION OF SOCIAL MEDIA:
AN INTEGRATED MODEL AND EMPIRICAL STUDY
ON FACEBOOK USAGE**

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ABSTRACT

Aim/Purpose	This study aims at (1) extending an existing theoretical framework to gain a deeper understanding of the technology acceptance process, notably of the Facebook social network in an unexplored Middle East context, (2) investigating the influence of social support theory on Facebook adoption outside the work context, (3) validating the effectiveness of the proposed research model for enhancing Facebook adoption, and (4) determining the effect of individual differences (gender, age, experience, and educational level) amongst Facebook users on the associated path between the proposed model constructs.
Background	Social networking sites (SNSs) are widely adopted to facilitate social interaction in the Web-based medium. As such, this present work contends that there is a gap in the existing literature, particularly in the Middle East context, as regards an empirical investigation of the relationship between the social, psychological, individual, and cognitive constructs potentially affecting users' intention to accept SNSs. The present research, therefore, attempts to address this deficit. The relevance of this work is also considered in light of the scarcity of empirical evidence and lack of detailed research on the effect of social support theory with regard to SNS adoption in a non-work context.
Methodology	A quantitative research approach was adopted for this study. The corresponding analysis was carried out based on structural equation modelling (SEM), more specifically, partial least squares (PLS), using SmartPLS software. Earlier research recommended the PLS approach for exploratory studies when extending an existing model or developing a new theory. PLS is also a superior method of complex causal modelling. Moreover, a multi-group analysis technique was adopted to investigate the moderating influence of individual differences. This method divides the dataset into two groups and then computes the cause and

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effect relationships between the research model variables for each set. The analysis of an in-person survey with a sample of Facebook users (N=369) subsequently suggested four significant predictors of continuous Facebook use.

Contribution	This study contributes to the body of knowledge relating to SNSs by providing empirical evidence of constructs that influence Facebook acceptance in the case of a developing country. It raises awareness of antecedents of Facebook acceptance at a time when SNSs are widely used in Arab nations and worldwide. It also contributes to previous literature on the effectiveness of the unified theory of acceptance and use of technology (UTAUT) in different cultural contexts. Another significant contribution of this study is that it has reported on the relevance of social support theory to Facebook adoption, with this theory demonstrating a significant and direct ability to predict Facebook acceptance. Finally, the present research identified the significant moderating effect of individual differences on the associated path between the proposed model constructs. This means that regardless of technological development, individual gaps still appeared to exist among users.
Findings	The findings suggested four significant predictors of continuous Facebook use, namely, (a) performance expectancy, (b) peer support, (c) family support, and (d) perceived playfulness. Furthermore, behavioral intention and facilitating conditions were found to be significant determinants of actual Facebook use, while individual differences were shown to moderate the path strength between several variables in the proposed research model.
Recommendations for Practitioners	The results of the present study make practical contributions to SNS organizations. For example, this research revealed that users do not adopt Facebook because of its usefulness alone; instead, users' acceptance is developed through a sequence of variables such as individual differences, psychological factors, and social and organizational beliefs. Accordingly, social media organizations should not consider only strategies that apply to just one context, but also to other contexts characterized by different beliefs, perceptions, and cultures. Moreover, the evidence provided here is that social support theory has a significant influence on SNSs acceptance. This suggests that social media organizations should provide services to support this concept. Furthermore, the significant positive effect of perceived playfulness on the intention to use SNSs implied that designers and organizations should pay further attention to the entertainment services provided by social networks.
Recommendations for Researchers	To validate the proposed conceptual framework, researchers from different countries and cultures are invited to apply the model. Moreover, a longitudinal research design could be implemented to gather data over a longer period, in order to investigate whether users have changed their attitudes, beliefs, perceptions, and intention by the end of the study period. Other constructs, such as individual experience, compatibility, and quality of working life could be included to improve the power of the proposed model.
Impact on Society	Middle Eastern Facebook users regard the network as an important tool for interacting with others. The increasing number of Facebook users renders it a tool of universal communication and enjoyment, as well as a marketing network. However, knowledge of the constructs affecting the application of SNSs is valuable for ensuring that such sites have the various functions required to suit different types of user.

Future Research	It is hoped that our future research will build on the results of this work and attempt to provide further explanation of why users accept SNSs. In this future research, the proposed research model could be adopted to explore SNSs acceptance in other developing countries. Researchers might also include other factors of potential influence on SNSs acceptance. The constructs influencing acceptance of other social networks could then be compared to the present research findings and thus, the differences and similarities would be highlighted.
Keywords	social media networks, Facebook acceptance, unified theory of acceptance and use of technology, (UTAUT), social support theory, perceived playfulness, individual differences, Middle East

INTRODUCTION

The innovation of social networks, also known as ‘relationship networks’, in the last decade has revolutionized the way in which organizations, societies, and individuals interact and communicate with each other. According to Kaplan and Haenlein (2010, p. 61), social networking media are defined as “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and allow the creation and exchange of user generated content.” However, the benefits of such platforms are not restricted to a specific application; social networking services (SNSs) can in fact be used by individuals, organizations, and customers to create, participate, and exchange information and/or ideas in a virtual environment (Ngai, Tao, & Moon, 2015). Based on the previous literature (Ellison, Steinfield, & Lampe, 2007; Starin, Baden, Bender, Spring, & Bhattacharjee, 2009), three different functions of social networks were consequently identified. The first was that they facilitate and enhance personal communications both on- and offline. Moreover, such applications can help people establish new connections and relationships. Finally, social media offer other beneficial services, aside from merely exchanging messages; for example, users can share their personal ideas, make comments on other users’ posts, exchange information, and declare or discover common preferences and interests.

To elaborate on the above, several different social media platforms have emerged to help shape people’s communication with each other, for example, Facebook, Twitter, and LinkedIn. However, Facebook is reported as the most widely adopted (Baresch, Knight, Harp, & Yaschur, 2011; Kwon, Park, & Kim, 2014; Teo, 2016), as of April 2018, based on its total active users (Statista, 2018). Recently, social networks have attracted considerable attention, not only as an important research topic, but more significantly, as a core and ubiquitous means of digital and virtual communication for billions of users worldwide (Dong, Cheng, & Wu, 2014). Facebook, for example, is gaining further popularity as an effective interaction and marketing network (Dong et al., 2014; Kwon et al., 2014), even in countries with poor information and communication technologies (ICTs).

However, a serious reluctance to take up new technology still prevails (Marangunic & Granic, 2015). Hence, research examining SNS adoption and users’ perceptions is necessary, particularly in developing countries such as Iraq, where the overall level of ICTs implementation is still at an early stage (Al-Azawei, 2017). The uniqueness of this research context is due to Iraq facing many obstacles to the widespread use of ICTs, such as sanctions imposed by the United Nations (UN), poverty and low income, political conflict, and unstable security (Al-Azawei, 2017). In fact, until mid-2003, the Internet was forbidden for public use by the Iraqi authorities. Hence, the population of Iraq have only relatively recently started using SNSs. As a result, there is a persistent need for empirical research to investigate the social, psychological and cognitive antecedents that can determine SNSs acceptance. This is due to a lack of consistent, detailed work on the constructs affecting SNSs acceptance, where previous research has shown mixed findings, even though the number of SNSs users is significantly increasing.

Concretely, the core objectives of this research were fourfold. First, it would attempt to highlight the ability of the unified theory of acceptance and use of technology (UTAUT) to predict the use of SNSs, namely Facebook, in an unexplored cultural context in the Middle East, exemplified in Iraq. The other objective was to understand the extent to which social support theory could influence users' behavior as regards SNS adoption in a non-work environment. Moreover, the research evaluated the integration of UTAUT, social support theory, and intrinsic motivation theory to predict Facebook acceptance. The philosophy behind this integration was that these three theories complement each other. To clarify, while UTAUT ignores the impact of social support on human intention and behavior, social support theory considers this role and how the support obtained by users from their families and/or peers can affect their decision over whether or not to perform a particular behavior. Additionally, UTAUT fails to consider the influence of intrinsic motivation, particularly for technologies such as social media networks. In contrast, perceived playfulness can fill this gap and identify how users adopt SNSs based on the fun and enjoyment that they perceive while interacting with such sites. To the best of the researcher's knowledge, these theories have not been integrated or examined in the previous literature. Finally, the present study highlighted the importance of individual differences in research on Facebook acceptance, as it investigated the moderating influence of gender, age, experience of using Facebook, and educational level on the associated path between the proposed model constructs.

To meet the research objectives, the study proceeded as follows. The theoretical background was established, and a conceptual model proposed, which is presented in the next section; delving into Facebook as an example of an information system to which the proposed model could be applied and identifying the research context. A set of hypotheses were then formulated, which are highlighted in subsequent sections, followed by the methodological features and research findings. The main outcomes are then discussed and connected to earlier studies. Finally, the primary research concepts and limitations are put forward, along with possible directions for future research.

THEORETICAL BACKGROUND AND THE CONCEPTUAL FRAMEWORK

FACEBOOK

On February 4th, 2004, Mark Zuckerberg launched a new application called 'thefacebook.com', for the use of Harvard University students. From these beginnings, it grew to its current position of prominence as a global social media network, with over two billion registered users worldwide. Out of over 500 million of these users, around 50% use Facebook daily and spend approximately 700 billion minutes a month pursuing this activity (Chang, Liu, & Shen, 2017). Moreover, over three billion pictures are uploaded onto the site each month, while more than five billion unique pieces are shared weekly, and 3.5 million events are created monthly (Lee & Paris, 2016).

Given Facebook's salability, it has recently been introduced into developing nations such as Iraq. However, Iraq has had low Internet penetration, with only 1% of the population enjoying access to the Internet until the end of 2009 (Internet World Stats, 2016). Currently, around 35% of the Iraqi population have Internet access (Internet World Stats, 2018). There have been numerous obstacles leading to this late introduction and expansion of ICTs in Iraq, which include, but are not limited to, a lack of ICTs infrastructure, insufficient financial support, a lack of technical support, poor ICTs literacy, and low awareness and interest amongst users (Al-Azawei, Parslow, & Lundqvist, 2016). Nevertheless, around 14 million Iraqi users had a Facebook account by the end of 2017 (Internet World Stats, 2018). Facebook is also the dominant social media network in Iraq, with a rate of use amounting to 20.5%, compared to, for example, Twitter at 2.27% and Instagram at 0.23% (GlobalStats, 2018).

SOCIAL SUPPORT THEORY

Social support theory is defined as “an exchange of resources between two individuals perceived by the provider or the recipient to be intended to enhance the wellbeing of the recipient.” (Shumaker & Brownell, 1984, p. 11). Weng, Tsai, and Weng (2015, p. 181) also define social support theory as “the perceived combined instrumental support, emotional support, and informational support received from different sources, such as family [and] peers”, in which there are associated benefits and values for both participants.

This theory has attracted significant attention in the social psychology literature for its theoretical influence on predicting individual wellbeing, while earlier research supported its positive effect on users’ intention to demonstrate a particular behavior (Shumaker & Brownell, 1984). Social support manifests between individuals who are usually members of the same network. Harris, Winskowski, and Engdahl (2007) reported that peer, supervisor, and family support can increase individuals’ resistance to any obstacles that they might face and reduce anxiety and depression. Moreover, Sultan and Rashid (2015) suggest that social support can partially mediate the relationship between user satisfaction and perceived stress.

Although most of the literature mentioned above has considered the association between social support and job satisfaction, the intention in this present research is to examine the relationship between perceived social support and the adoption of social media networks, especially Facebook. To the best of the author’s current knowledge, this area of research has not yet been studied. In line with our assumption, Weng et al. (2015) found that family support was a predictor of the behavioral intention to adopt a Web-based learning system, whereas peer support was not. Hence, this study suggests the following hypotheses, in light of the nature of the proposed relationships:

H1: Perceived peer support is a significant predictor of the behavioral intention to accept Facebook.

H2: Perceived family support is a significant predictor of the behavioral intention to accept Facebook.

PERCEIVED PLAYFULNESS

It is clear that Facebook is used to communicate and interact with others, send and receive information, and buy or sell products (Dong et al., 2014; Kwon et al., 2014). It is also used for the purpose of entertainment and enjoyment, including the search for humorous videos and sites based on personal interests and hobbies (Pillai, 2014). Accordingly, it is important to ascertain whether the personal perception of fun and playfulness has an effect on the decision to participate in social media networks, such as Facebook.

Perceived playfulness is based on accomplishing a task or activity purely for the fun and enjoyment of that task or activity (Atkinson & Kydd, 1997). As such, it is defined as “the perceived hedonic value amplified by fun, excitement, creativity and pleasure accruing from use of the system” (Çelik, 2011, p. 393). However, previous theories of technology adoption, such as the technology acceptance model (TAM), its parents (including the theory of reasoned action), and its branches (for example, TAM2 and UTAUT) ignored the role of the hedonic value obtained by users from pleasure, enjoyment, and excitement. Conversely, there is evidence from previous research that this construct significantly affects technology adoption and usage. For example, Venkatesh (2000) confirmed that more ‘playful’ users are more likely to use a particular technology than others who display less ‘playfulness’, and often underestimate the issues and difficulties likely to accompany its use.

Playfulness has been dealt with either as a temporary state or a personality trait (Barnett, 1990; Webster, Trevino, & Ryan, 1993), but in either case, it is an influential variable in a user’s decision to accept a particular technology (Atkinson & Kydd, 1997; Çelik, 2011). Based on flow theory, Moon and Kim (2001) extended TAM by including perceived playfulness to capture users’ feelings of

pleasure; caused by ‘cognitive spontaneity’ when these users interact with a system. Other studies have also supported its effect on Facebook acceptance (Lee & Paris, 2016; Rosen & Sherman, 2006; Pillai, 2014). Accordingly, this research hypothesizes that:

H3: Perceived playfulness (PP) is a significant predictor of the behavioral intention to accept Facebook.

UNIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY (UTAUT)

Venkatesh, Morris, Davis, and Davis (2003) reviewed eight of the best-known technology adoption theories; concluding that there was a persistent need to enhance the predictive power of the available theories. They consequently proposed UTAUT, suggesting that performance expectancy, effort expectancy, and social influence are direct determinants of behavioral intention, whereas intention to use and facilitating conditions are determinants of actual use. Furthermore, it was expected that gender, age, experience, and voluntariness would moderate these relationships.

According to Venkatesh et al. (2003), each variable in the UTAUT model has a specific meaning. For example, performance expectancy refers to the positive outcome perceived by users as a result of performing a behavior, namely the adoption of Facebook in this context. In general, effort expectancy has been found to be a significant predictor of technology adoption (Akinbobola & Adeleke, 2016). In relation to Facebook acceptance, empirical analysis revealed that this variable is a significant antecedent (Kwon et al., 2014). Moreover, effort expectancy measures the mental effort required to use a technology. Previous research identified a significant relationship between effort expectancy and the continuous intention to use Facebook (Chang et al., 2017). Third, subjective norms account for the social pressure to either perform or fail to perform a specific behavior. One study conducted by Oliveira, Karina, Huertas, and Lin (2016) clearly identified that social norms were an antecedent of Facebook adoption. Sin, Nor, and Al-Agaga’s (2012) findings indicate that performance expectancy, effort expectancy, and subjective norms are predictive variables of users’ intention to make purchases via social media networks. Another study suggested that social influence has a significant effect on Facebook acceptance (Chang et al., 2017), whereas Dumpit and Fernandez (2017) demonstrated that ‘perceived ease of use’ (equivalent to effort expectancy), ‘perceived usefulness’ (equivalent to performance expectancy), subjective norms, and perceived playfulness are predictors of social media network acceptance.

Venkatesh et al. (2003) evaluated UTAUT using data from one group of 215 participants and another of 399 participants at different periods. Overall, the results indicated that the model explained 69% and 70% of variance, respectively, with regard to technology acceptance. However, Dwivedi, Rana, Chen, and Williams (2011) reviewed 27 papers that empirically and quantitatively evaluated UTAUT. Their outcomes showed that the model under-performed in comparison to the original study, where the variance of behavioral intention explained by the model in different contexts ranged from 30% to 70%. Moreover, Mtebe, Mbwilo, and Kissaka (2016) used extended UTAUT to identify teachers’ acceptance of multimedia content; successfully explaining 40.2% of the variance for behavioral intention. In the present research, the following were proposed based on UTAUT:

H4: Performance expectancy is a significant predictor of the behavioral intention to accept Facebook.

H5: Effort expectancy is a significant predictor of behavioral intention to accept Facebook.

H6: Subjective norms are significant predictors of the behavioral intention to accept Facebook.

Behavioral intention is defined as a user’s cognitive representation of the willingness to perform a certain behavior (Ajzen & Fishbein, 1980). According to the theory of reasoned action (Ajzen & Fishbein, 1980), it plays a vital role in predicting actual behavior, which has also been confirmed in the research study conducted by Davis, Bagozzi, and Warshaw (1989). In the context of social media,

Dumpit and Fernandez (2017) found behavioral intention to be a strong predictor of actual SNSs use. This result corroborated another research study conducted by Lallmahomed, Zairah, Rahim, Ibrahim, and Rahman (2013), who ascertained that the behavioral intention to adopt Facebook was a significant determinant of its actual use. Finally, the facilitating conditions explain the extent to which a user believes that the organizational and technical infrastructure required to support technology use exists. In fact, Venkatesh et al. (2003) proved that facilitating conditions can significantly determine actual technology use, and this assumption has been supported by other studies on information systems (Alshehri & Drew, 2012; Tarhini, El-Masri, Ali, & Serrano, 2016). Based on UTAUT, Hanson et al. (2011) also illustrated a relationship between facilitating conditions and the use of social media networks. Therefore, it is suggested here that:

H7: The facilitating conditions construct is a significant predictor of actual Facebook use.

H8: The behavioral intention to accept Facebook is a significant predictor of its actual use.

Figure 1 depicts this model and the relationship between its constructs and moderators.

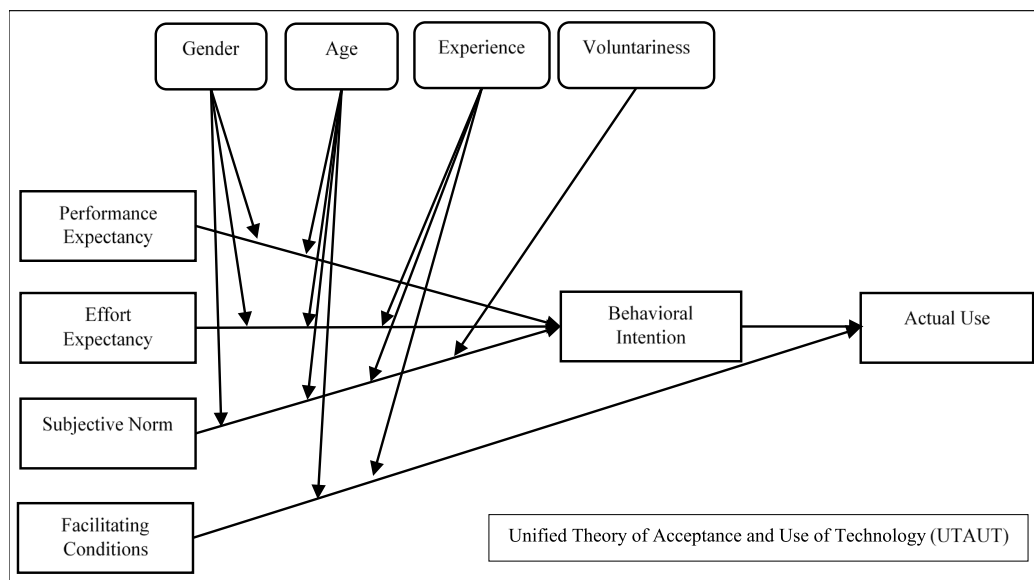


Figure 1: The Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003)

INDIVIDUAL DIFFERENCES

The main criticism directed towards earlier theories on the acceptance of information systems was that these models ignored the influence of individual differences on technology adoption. For example, TAM, proposed by Davis (1986), is one of the most frequently cited and implemented models in the field of information systems. However, it does not account for cultural or individual differences (Al-Azawei, 2017; Bagozzi, 2007). Therefore, other models based on TAM have been developed to consider such differences. For example, the revised TAM included the factors of experience and voluntariness as moderators (Venkatesh & Davis, 2000). UTAUT encompasses these individual characteristics, as well as gender and age (Venkatesh et al., 2003). Another research study conducted by Akinbobola and Adeleke (2016) extended TAM to include gender, educational level, and computer experience as direct determinants of effort expectancy.

Aside from the above, the influence of users' individual characteristics on technology acceptance has been theoretically justified and empirically supported to demonstrate that men and women have different concerns over the role of performance expectancy, effort expectancy, and/or social influence in technology adoption (Alkhalidi, 2017; Gefen & Straub, 1997; Hilao & Wichadee, 2017; Terzis & Economides, 2011; Venkatesh et al., 2003). Other studies have suggested a relationship between

more advanced age with difficulty in processing information and using software systems (Tarhini, Hone, & Liu, 2014; Venkatesh et al., 2003). Users' experience of a particular innovation or technology has likewise indicated a significant moderating influence on the path strength between different latent variables to predict technology acceptance (Tarhini et al., 2014; Venkatesh et al., 2003).

In the present research, the moderators proposed in UTAUT were adopted. However, the moderating effect of 'voluntariness' was not investigated, because this variable needs to be considered in a longitudinal research design, where the use of a technology is either mandatory or voluntary over a period of time (Venkatesh et al., 2003). Additionally, another moderator was included in this study, namely, educational level, since its moderating effect on technology adoption has been suggested in the previous literature (Tarhini et al., 2014). Hence, the proposed model included nine constructs and four moderators (see Figure 2).

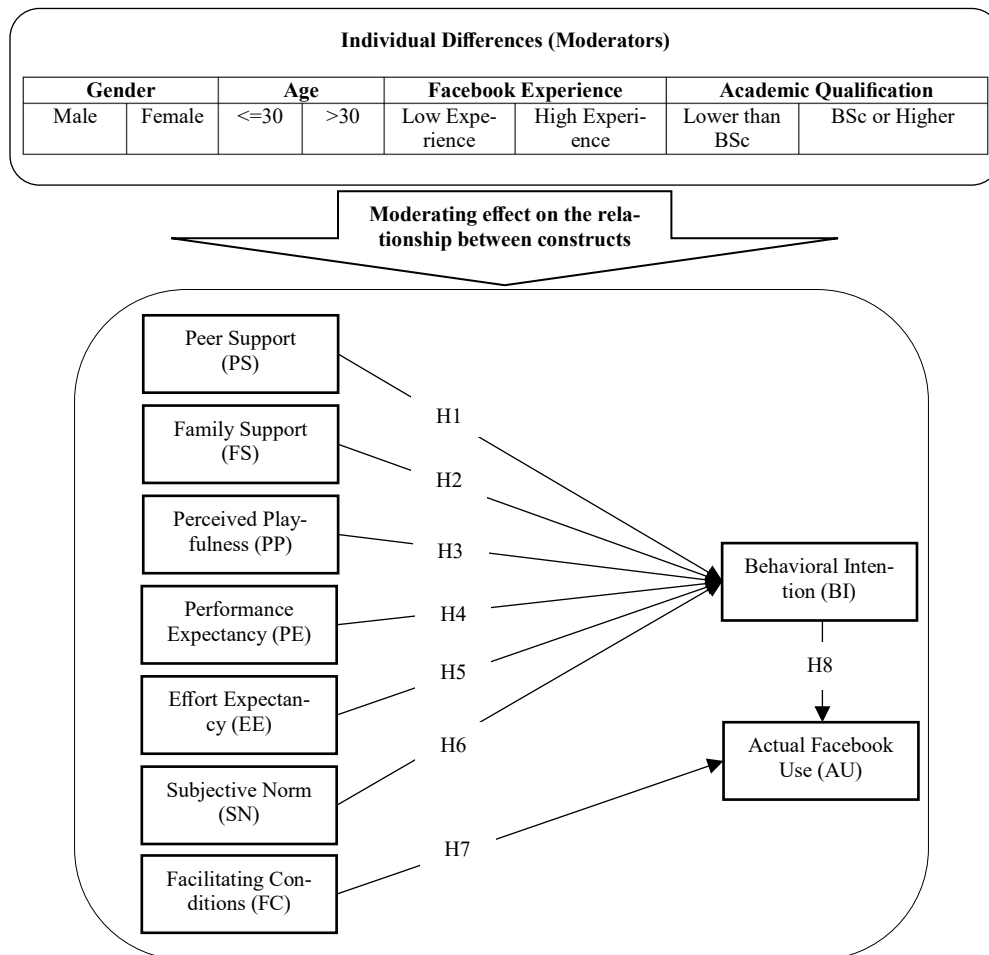


Figure 2: The proposed conceptual model

METHODS

THE PARTICIPANTS

The research participants were recruited from various locations in central governorates in Iraq, whereby approximately 500 questionnaires were distributed. The participants were selected based on their Facebook use, leading to 369 valid questionnaires being returned. All of the research subjects gave their consent to take part in the study. It was explained in the cover letter accompanying the questionnaire that the data would be used for academic research only and no personal information

would be published or passed to another party for any reason. Out of the 369 participants, 180 (48.8%) were male and 189 (51.2%) were female. Regarding the age group, 253 (68.6%) were aged between 18 and 30, with 116 (31.4%) being over 30 years old. In terms of educational background, 179 (48.5%) did not hold a bachelor's degree, but 189 (51.2%) had obtained a bachelor's or postgraduate degree. Amongst the participants overall, 185 (50.1%) described their experience of Facebook as low, whereas 184 (49.9%) described themselves as being highly experienced Facebook users.

MATERIALS

The completed survey consisted of items designed to measure users' continuous intention to adopt Facebook, namely behavioral intention, peer support, perceived family support, performance expectancy, effort expectancy, subjective norms, facilitating conditions, perceived playfulness, and actual Facebook use. All items in the survey were scored using a long, five-point Likert scale, ranging from 1= 'strongly disagree' to 5= 'strongly agree'. The order of the questions was retained in all the surveys distributed and completed, without direct supervision from the researcher. The questionnaire was sent out to Facebook users with the voluntary assistance of a number of Computer Science students living in different governorates across central Iraq. These volunteers further distributed the survey to any family members or friends who had a Facebook account. Subsequently, 369 valid questionnaires were collected and returned to the researcher. These data were gathered in January 2018 over a period of around three weeks.

MEASURES

The proposed research model contained nine constructs from three different theories, as well as four moderators. With regard to social support theory, two variables were included, namely, peer support and perceived family support. To measure users' perceptions of the support received from peers when they came to use the Facebook social media network, a four-item scale was used, adapted from Weng et al. (2015). This scale measured the encouragement and praise received by users from friends as regards Facebook use, as well as the extent of the technical support provided by peers. The measurement indicated that this scale was reliable (Cronbach's $\alpha=0.770$). Perceptions of family support were also measured in relation to Facebook use, with the creation of a three-item scale adapted from Weng et al. (2015). The items measured the extent to which family members encouraged and praised users in their Facebook use, as well as the technical support received when the users faced problems. The reliability measurement showed that this scale was also reliable (Cronbach's $\alpha=0.818$).

Pertaining to UTAUT's constructs, performance expectancy, effort expectancy, subjective norms, facilitating conditions, behavioral intention, and actual Facebook use were evaluated. To measure users' perceptions of Facebook's usefulness (performance expectancy), a four-item scale was defined, using items adapted from Al-Azawei, Parslow, and Lundqvist (2017a) and Venkatesh and Davis (2000). These items measured how far Facebook use assisted in improving communication with others, as well as the 'usefulness' of this network, whereby the above scale proved to be reliable (Cronbach's $\alpha=0.795$). In addition, effort expectancy was measured using three items adapted from Al-Azawei et al. (2017a) and Venkatesh and Davis (2000) to measure how well participants could use Facebook functions and perform different tasks with ease. The resulting scale likewise proved to be reliable (Cronbach's $\alpha=0.703$). To investigate the effect of social influence on Facebook use – the subjective norm – a scale was subsequently developed, encompassing three items adapted from Tarhini (2013) to measure the importance of a participant's Facebook use to his or her family and friends, whereby the analysis showed this scale to be reliable (Cronbach's $\alpha=0.803$). The facilitating conditions were also designed using three items adapted from Tarhini (2013), which measured the technical help and assistance received by users from any quarter when they came to use Facebook. This scale was likewise indicated as reliable (Cronbach's $\alpha=0.702$). Meanwhile, to measure users' willingness to adopt Facebook, namely, their behavioral intention, a five-item scale was adapted from Al-Azawei et al. (2017a) and Tarhini (2013). This scale measured users' intention to

adopt Facebook in the near future and the likelihood of them recommending Facebook to others, with the reliability of this scale likewise being confirmed (Cronbach's $\alpha=0.879$). Finally, a scale was developed to measure actual Facebook use, consisting of three items adapted from Venkatesh et al. (2003) and Tarhini (2013), except with the omission of one item due to its low loading. The above three items evaluated Facebook usage based on daily use or frequency, with the analysis proving the reliability of this scale (Cronbach's $\alpha=0.845$).

The other theory integrated with the proposed model was intrinsic motivation theory, in which perceived playfulness was included. The hedonic value (fun, pleasure, and enjoyment) of using Facebook was, therefore, measured with a seven-item scale adapted from Atkinson and Kydd (1997) and Eom and Ashill (2016). However, three items were excluded from the analysis, because of their weak loading. This scale measured the fun experienced by users when using Facebook and the change in their exploration and curiosity, with the reliability of the scale being supported (Cronbach's $\alpha=0.759$) (see the Appendix for the reported research survey items).

Users' individual differences such as gender, age, experience of Facebook, and educational level were proposed as moderators of the association between the constructs of the proposed research model. They were evaluated based on dichotomic questions and adapted from Venkatesh et al. (2003) and Tarhini et al. (2014). The following questions were used to define these characteristics (for example, 'Gender: 1-Male, 2-Female'; 'Age: 1-Less than or equal to 30 years old, 2-Over 30 years old'; 'Experience of Facebook use: 1-I have a low level of experience, 2- I have a high level of experience'; 'Academic qualification: 1-I have less than a bachelor's degree, 2-I have a bachelor's degree or higher').

THE FINDINGS

The aim of this study was to (1) highlight UTAUT's ability to determine Facebook acceptance in an under-represented Arab context, namely Iraq, (2) understand the effect of social support theory on Facebook adoption in a non-work context, (3) validate the effectiveness of the integrated conceptual model, and (4) assess the moderating effect of individual differences on the path hypothesized between the proposed model constructs. The key steps followed to meet these objectives were (1) the reporting of descriptive statistics and a traditional test of the hypotheses, (2) an analysis of unidimensionality, (3) evaluation of the measurement model, (4) structural equation modelling (SEM), and (5) the application of a multi-group analysis technique.

DESCRIPTIVE STATISTICS AND ANALYSIS OF THE PRELIMINARY HYPOTHESES

Table 1 depicts the descriptive statistics of the research model variables; encompassing mean scores, standard deviation, skewness, and kurtosis. While skewness refers to "an indication of the symmetry of the distribution", kurtosis provides "information about the 'peakedness' of the distribution" (Pallant, 2013, p. 59). It is suggested that skewness and kurtosis values "above +3 and below -3 are a good indication that the variable is not normally distributed" (Peat & Barton, 2005, p. 31). The results in Table 1 clearly indicate that the current dataset was normally distributed. To check for the association between the proposed model constructs and their relationship with the behavioral intention to use Facebook, a correlation matrix was generated based on Pearson's correlation coefficient. As expected, Table 2 shows that each variable was significantly associated with the behavioral intention to accept Facebook and in turn, this provided preliminary support for the proposed hypotheses.

ANALYSIS OF UNIDIMENSIONALITY

In an SEM technique, it is important to examine the unidimensionality of each factor in the conceptual model. A variable is supported as unidimensional when the reliability of its internal consistency (usually a Cronbach's alpha value) and composite reliability values are greater than or equal to 0.7 (Garver & Mentzer, 1999; Hair, Black, Babin, Anderson, & Tatham, 2006). As illustrated in Table 3,

for all nine variables in the proposed research framework, the Cronbach's alpha values ranged from 0.702 to 0.879 and the composite reliability (CR) ranged from 0.831 and 0.928, thus exceeding the recommended threshold.

ANALYSIS OF THE MEASUREMENT MODEL

The findings from the measurement framework are reported in Tables 3 and 4: encompassing average variance extracted (AVE), composite reliability (CR), variance inflation factors (VIF) as a multi-collinearity measure, Cronbach's alpha, outer weight, item loading, and discriminant validity. AVE is accounted for to investigate the convergent validity of reflective variables. As listed in Table 3, the AVE scores in the present research ranged from 0.581 to 0.866, exceeding the threshold of 0.5 (Fornell & Larcker, 1981). Meanwhile, the composite reliability varied from 0.831 to 0.928 and internal consistency reliability ranged from 0.702 to 0.879 for all latent variables passing the threshold of 0.7 (Garver & Mentzer, 1999).

The assumption of multi-collinearity was not violated, as supported by the VIF values. Table 3 illustrates that the outer loadings – referring to the loadings of the reflective items with their respective construct – are measured to investigate the reliability of an individual item. It is recommended that the loading of an item is acceptable, if it is equal to or higher than 0.7 (Hulland, 1999). In this research, the outer loadings for all items ranged from 0.718 to 0.931, except for one, where the loading was 0.675. Table 4 depicts the discriminant validity of the research measurement, which is established if the square root of the AVE for each model variable exceeds the associations between the variable itself and other factors in the research model (Fornell & Larcker, 1981).

Table 1: Descriptive statistics for factors determining behavioral intention and actual Facebook use (N=369)

Factors	M	SD	Skewness	Kurtosis
Gender	1.51	.501	-.049	-2.009
Age	1.31	.465	.803	-1.363
Peer Support (PS)	3.29	.795	-.535	-.238
Family Support (FS)	3.21	.965	-.382	-.607
Perceived Playfulness (PP)	3.34	.776	-.491	.238
Performance Expectancy (PE)	3.80	.633	-1.315	.253
Effort Expectancy (EE)	3.57	.725	-.621	.727
Subjective Norm (SN)	3.13	.930	-.208	-.839
Facilitating Conditions (FC)	3.76	.745	-1.115	1.574
Behavioral Intention (BI)	3.71	.791	-1.054	1.577
Actual Use (AU)	3.49	.953	-.647	.028

Table 2: Pearson's correlation analysis

	EE	SN	FC	PS	FS	PP	BI	AU
PE	.228**	.159**	.261**	.275**	.147**	.261**	.458**	.268**
EE		.205**	.305**	.229**	.106*	.215**	.217**	.212**
SN			.122*	.415**	.339**	.232**	.247**	.137**
FC				.327**	.215**	.227**	.216**	.200**
PS					.476**	.356**	.378**	.198**
FS						.226**	.286**	.109*
PP							.396**	.435**
BI								.512**

** . Correlation is significant at the 0.01 level (2-tailed). * . Correlation is significant at the 0.05 level (2-tailed).

Notes: AU=Actual use; EE=Effort expectancy; FC=Facilitating conditions; FS=Family support; BI=Behavioral intention; PS=Peer support; PP=Perceived playfulness; PE=Performance expectancy; SN=Subjective norm

Table 3: AVE, CR, VIF, Cronbach's alpha, outer weight and loadings of estimates made using the measurement framework

Latent Variable	Manifest Variable	AVE	CR	VIF	Cronbach's Alpha	Outer Weight	Loadings
Peer Support (PS)	PS1	0.591	0.852	1.625	0.770	0.365	0.786
	PS2					0.337	0.807
	PS3					0.268	0.737
	PS4					0.328	0.742
Family Support (FS)	FS1	0.733	0.892	1.354	0.818	0.416	0.829
	FS2					0.349	0.876
	FS3					0.405	0.863
Perceived Playfulness (PP)	PP1	0.581	0.847	1.232	0.759	0.363	0.829
	PP2					0.310	0.777
	PP3					0.263	0.675
	PP4					0.370	0.760
Performance Expectancy (PE)	PE1	0.620	0.867	1.159	0.795	0.296	0.803
	PE2					0.338	0.844
	PE3					0.324	0.738
	PE4					0.311	0.761
Effort Expectancy (EE)	EE1	0.622	0.831	1.136	0.703	0.296	0.748
	EE2					0.496	0.838
	EE3					0.467	0.778
Subjective Norm (SN)	SS1	0.714	0.882	1.306	0.803	0.466	0.884
	SS2					0.429	0.878
	SS3					0.275	0.767
Facilitating Conditions (FC)	FC1	0.622	0.831		0.702	0.514	0.847
	FC2					0.438	0.807
	FC3					0.300	0.705
Behavioral Intention (BI)	BI1	0.677	0.913	1.050	0.879	0.251	0.852
	BI2					0.231	0.842
	BI3					0.226	0.850
	BI4					0.251	0.718
	BI5					0.260	0.843
Actual Use (AU)	AU1	0.866	0.928	1.050	0.845	0.539	0.931
	AU2					0.536	0.930

Table 4: Discriminant validity of the research factors

	AU	EE	FC	FS	BI	PS	PP	PE	SN
AU	0.931								
EE	0.224	0.789							
FC	0.215	0.331	0.788						
FS	0.089	0.100	0.199	0.856					
BI	0.506	0.213	0.218	0.287	0.823				
PS	0.198	0.236	0.330	0.482	0.382	0.769			
PP	0.466	0.225	0.233	0.240	0.403	0.374	0.762		
PE	0.267	0.251	0.268	0.151	0.464	0.281	0.267	0.788	
SN	0.109	0.219	0.120	0.351	0.259	0.436	0.242	0.169	0.845

Notes: AU=Actual use; EE=Effort expectancy; FC=Facilitating conditions; FS=Family support; BI=Behavioral intention; PS=Peer support; PP=Perceived playfulness; PE=Performance expectancy; SN=Subjective norm

STRUCTURAL MODELLING AND RESULTS

Structural modelling of the original UTAUT

To achieve the first research objective, the original relationships in the UTAUT model were tested first (see Table 5). It was thus revealed that performance expectancy ($\beta_{\text{performance expectancy} \rightarrow \text{behavioral intention}}=0.418$, $P<0.001$) and subjective norms ($\beta_{\text{subjective norm} \rightarrow \text{behavioral intention}}=0.172$, $P<0.01$) had a positive and significant association with behavioral intention; whereas effort expectancy ($\beta_{\text{effort expectancy} \rightarrow \text{behavioral intention}}=0.071$, $P=0.254$) was a weak predictor. Overall, these constructs explained 25.3% ($R^2=0.253$) of the variance of behavioral intention.

The research analysis also confirmed that both facilitating conditions ($\beta_{\text{facilitating conditions} \rightarrow \text{actual Facebook use}}=0.110$, $P=0.023$) and behavioral intention to use Facebook ($\beta_{\text{behavioral intention} \rightarrow \text{actual Facebook use}}=0.481$, $P<0.001$) were determinants of actual Facebook use, whereby they explained 26.6% ($R^2=0.266$) of its variance. Thus, four hypotheses out of five in UTAUT were confirmed.

Table 5: The structural model findings for UTAUT

Path	Path coefficient (β)	P-value	t-value	Hypothesis finding
PE→BI	0.418	<0.001	8.703	Supported
EE→BI	0.071	0.254	1.142	Not Supported
SN→BI	0.172	<0.01	3.471	Supported
FC→AU	0.110	0.023	2.288	Supported
BI→AU	0.481	<0.001	10.439	Supported

Notes: AU=Actual use; EE=Effort expectancy; FC=Facilitating conditions; BI=Behavioral intention; PE=Performance expectancy; SN: Subjective norm

Structural modelling of the social support theory constructs

This analysis was performed to cover the second research objective. Both constructs of social support theory, namely peer support and family support were significant determinants of the intention to accept Facebook. The findings confirmed that peer support was positively and significantly associated with the behavioral intention to accept Facebook ($\beta_{\text{peer support} \rightarrow \text{behavioral intention}}=0.320$, $P<0.001$). Family support was likewise found to be a predictor of users' intention to accept Facebook ($\beta_{\text{family support} \rightarrow \text{behavioral intention}}=0.135$, $P=0.008$). These two factors explained 16.2% ($R^2=0.162$) of the variance of Facebook adoption.

Structural modelling of the proposed framework

The third objective highlighted in this research was to identify the ability of the proposed model to predict the adoption of SNSs. Thus, the structural model was measured, which assessed the cause and effect associations between the latent variables of the proposed framework. This analysis derived the path coefficient for the model's latent constructs and R-square values (these structural model findings are reported in Table 6 and Figure 3).

The level of significance in this analysis was set at a P-value of less than 0.05. The empirical findings corroborated the fact that peer support was positively and significantly associated with the behavioral intention to accept Facebook ($\beta_{\text{peer support} \rightarrow \text{behavioral intention}}=0.126, P=0.040$). Another variable from social support theory, which was included in the current research model, was family support. It was similarly found to be a significant predictor of the behavioral intention to accept Facebook ($\beta_{\text{family support} \rightarrow \text{behavioral intention}}=0.101, P=0.049$). Furthermore, perceived playfulness was another variable extended in the research model and this was likewise found to be a determinant of Facebook acceptance ($\beta_{\text{perceived playfulness} \rightarrow \text{behavioral intention}}=0.223, P<0.001$). Thus, all variables integrated into the proposed model were confirmed as significant predictors of the behavioral intention to accept Facebook.

With reference to the UTAUT variables, performance expectancy had a positive and significant association with the continued intention to accept Facebook ($\beta_{\text{performance expectancy} \rightarrow \text{behavioral intention}}=0.339, P<0.001$). However, contrary to the assumption that effort expectancy is significantly associated with the continued intention to use Facebook, the results revealed it to be a weak predictor ($\beta_{\text{effort expectancy} \rightarrow \text{behavioral intention}}=0.027, P=0.618$). Finally, the subjective norm was not a determinant of behavioral intention ($\beta_{\text{subjective norm} \rightarrow \text{behavioral intention}}=0.051, P=0.293$). Overall, hypotheses H1, H2, H3 and H4 postulated in the present research were confirmed, whereas H5 and H6 were rejected. The model variables explained 34.3% of the variance of the behavioral intention to accept Facebook ($R^2=0.343$).

To predict actual Facebook use, facilitating conditions and behavioral intention were the predictive variables ($\beta_{\text{facilitating conditions} \rightarrow \text{actual use}}=0.109, P=0.024, \beta_{\text{behavioral intention} \rightarrow \text{actual use}}=0.483, P<0.001$). Accordingly, hypotheses H7 and H8 were supported; explaining 26.8% of actual Facebook use ($R^2=0.268$).

Table 6: The structural model findings of the proposed model

Path	Path coefficient (β)	P-value	t-value	Hypothesis finding
H1: PS→BI	0.126	0.040	2.053	Supported
H2: FS→BI	0.101	0.049	1.970	Supported
H3: PP→BI	0.223	<0.001	3.825	Supported
H4: PE→BI	0.339	<0.001	6.922	Supported
H5: EE→BI	0.027	0.618	0.499	Not Supported
H6: SN→BI	0.051	0.293	1.051	Not Supported
H7: FC→AU	0.109	0.024	2.259	Supported
H8: BI→AU	0.483	<0.001	10.239	Supported

Notes: Actual use; **EE**=Effort expectancy; **FC**=Facilitating conditions; **FS**=Family support; **BI**=Behavioral intention; **PS**=Peer support; **PP**=Perceived playfulness; **PE**=Performance expectancy; **SN**: Subjective norm

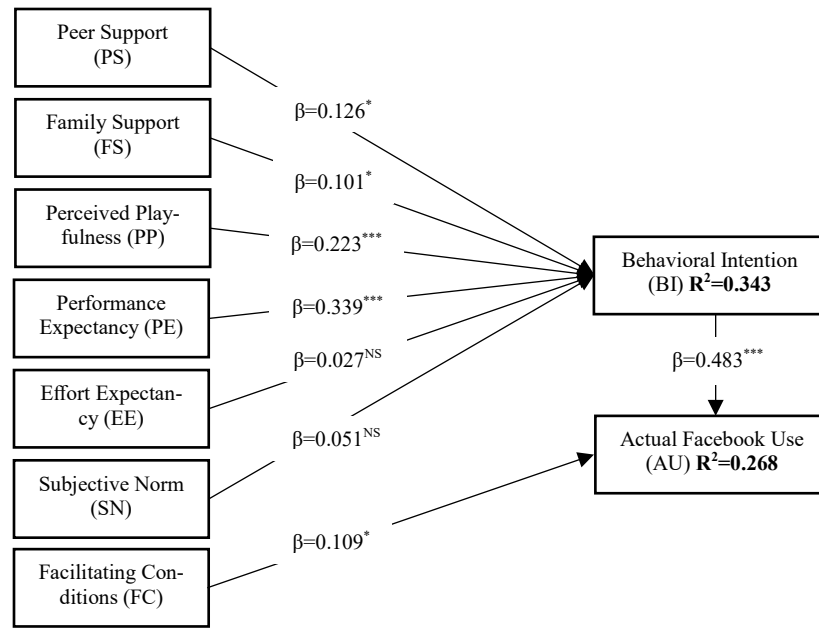


Figure 3: The structural model findings

Analysis of the moderators

A multi-group analysis technique was applied to meet the fourth research objective, namely to measure the differences between groups and analyze their moderating effect on the relationship between the research model constructs. Table 7 shows a significant difference in path strength based on individual differences. That is to say, the users' features had a modifying effect on the path strength between the research model's latent constructs. Among these influences, three characteristics influenced peer support and behavioral intention path coefficients; two affected the family support and behavioral intention path coefficients; two influenced the perceived playfulness and behavioral intention path coefficients, and one characteristic affected the subjective norm and behavioral intention path coefficient.

Table 7: The effect of moderators on path strength between the research model constructs

Hypothesis Path	The moderating effect of individual differences							
	Gender		Age		Experience		Academic Level	
	Male	Female	<=30	>30	Low Experience	High experience	Less than BSc	BSc or Higher
H1: PS → BI	0.199*	0.032			0.080	0.223**	-0.012	0.213*
H2: FS → BI			0.145*	0.034			0.049	0.172*
H3: PP → BI	0.179*	0.289***			0.278***	0.185*		
H4: PE → BI								
H4: EE → BI								
H6: SN → BI	-0.131	0.189**						
H7: FC → AU								
H8: BI → AU								

*significant at the 0.05 level, **significant at the 0.01 level, ***significant at the 0.001 level

Notes: AU=Actual use; EE=Effort expectancy; FC=Facilitating conditions; FS=Family support; BI=Behavioral intention; PS=Peer support; PP=Perceived playfulness; PE= Performance expectancy; SN: Subjective norm

DISCUSSION

The findings successfully supported the research objectives, with this study pursuing four goals. The first was to understand the effect of UTAUT on predicting Facebook acceptance in an unexplored Middle Eastern country, Iraq. The influence of social support theory on Facebook acceptance in a non-work environment was also investigated, where people use SNSs to meet their own needs without any pressure from a particular employer or organization. Moreover, this research integrated UTAUT with the social support and intrinsic motivation theories, in order to gain an understanding of users' attitudes towards Facebook adoption. Finally, it measured the moderating influence of individual differences on the path strength between the model constructs. This section delves into the findings derived for each goal.

THE ORIGINAL UTAUT

The outcomes supported the adoption of UTAUT to investigate Facebook acceptance in a hitherto unexplored Middle Eastern country, namely, Iraq. The model's efficiency was established according to three elements. The first of these was that the original hypotheses in UTAUT were statistically upheld, except for the influence of effort expectancy (see Table 5), indicating that a change in the determinant values was related to changes in response values (The Minitab Blog, 2013). The results showed that the strongest predictor was performance expectancy, in agreement with previous research (Williams, Rana, & Dwivedi, 2015). The findings obtained from this analysis also provided an acceptable level of explanatory power through the variance explained by the model (25.3% of behavioral intention and 26.6% of actual Facebook use). Although these values are not high, such explanation is acceptable in studies seeking to predict human behavior. Overall, the research findings provided support for the conclusion drawn by Dwivedi et al. (2011) that UTAUT under-performs in different cultures and contexts. Third, the model constructs and their reliability and validity were supported, which further advocates the use of this framework in different cultural contexts.

SOCIAL SUPPORT THEORY AND THE INTEGRATED CONCEPTUAL MODEL

The proposed model successfully explained 34.3% of the variance of behavioral intention, whereas the original UTAUT explained 25.3%. Four variables were found to be significant predictors of behavioral intention, namely, peer support, family support, perceived playfulness, and performance expectancy (see Table 6 and Figure 3).

This research, therefore, provided empirical evidence of the association between social support theory and Facebook acceptance. It was perhaps the most important result here, with previous studies failing to investigate this relationship in the context of SNSs, although it has been widely assessed in work contexts. For example, both peer and family support were significant antecedents of the behavioral intention to accept Facebook. These findings also corroborated previous research into the influence of social support on trainees' decisions to use e-learning systems (Weng et al., 2015). A rational explanation for such outcomes could be that the users' behavioral intention to use an SNS (Facebook) was directly affected by their social environment, where shared ideas, general comments, and positive encouragement all motivated them to perform a certain behavior. Thus, social support from family and friends could have helped mitigate individuals' negative attitudes to SNSs. In this regard, Arab culture strongly resists any social change, especially to the way in which people communicate and interact with each other. The current research findings, however, indicated that family members and friends can play a key role in directing the use of SNSs in a positive way, where users perceive that their relatives or close friends do not have a negative attitude to these sites. Hence, it is suggested that the more social support that users receive when accessing SNSs, the more likely it is that they will continue reaping the benefits of SNSs in future. In earlier literature, it was discussed that family support could also assist people in balancing their time commitments and reducing work-family conflict. As we are living in the digital age, most people are concerned about forming traditional relation-

ships, which could affect their decision to use modern communication technologies. However, this negative belief can be changed through social support. In brief, although SNSs offer several benefits, further attention must be given to the unintended outcomes that modern technologies can produce.

The other strong predictor to emerge was perceived playfulness. Corresponding to these findings, Pillai (2014) also found it to be a significant determinant of Facebook acceptance. The results of the present study suggested that a high level of perceived playfulness could reduce cognitive burden and in turn, lead to users overcoming the obstacles to using Facebook. As a result, users would be more willing to continue using the technology, possibly because the current design of SNSs ensures that the amount of effort required for information processing is minimized and that users' experience enjoyment and fun. In SNSs, a variety of multimedia resources are deployed and navigational control is supported. Such features facilitate the playful use of SNSs. Thus, it appeared that Facebook users still perceived SNSs as a medium of fun, enjoyment, and leisure.

In the present study, performance expectancy was found to be the best determinant of behavioral intention, and these findings were consistent with those of previous research (Akinbobola & Adeleke, 2016; Al-Azawei et al., 2017a; Kwon et al., 2014; Sin et al., 2012; Venkatesh et al., 2003). This positive effect of performance expectancy on the intention to use Facebook suggested that the more users believed that Facebook was useful for enhancing their online communication, the more likely it was that they would intend to accept it. For example, if SNSs do not help improve online interaction and communication, users will go back to using traditional communication methods or look for other tools. Nevertheless, the social networks have the additional benefit of providing new information, enabling purchases to be made online, and providing entertainment. It is, therefore, evident that services of this nature, provided free of charge on Facebook, promote the enhancement of users' perceptions of the network's benefits.

Unlike our hypothesis, effort expectancy was not found to be a predictor of the behavioral intention to use Facebook and this was therefore consistent with other studies carried out by Lallmahomed et al. (2013) and Al-Azawei, Parslow, and Lundqvist (2017b). The effect of effort expectancy depends greatly on the maturity of a particular technology. For example, if users are highly experienced in using it, the effect of effort expectancy will be reduced. As discussed previously, Facebook is the most commonly SNSs adopted by Iraqi users and, as a result, they are likely to be familiar with its design, features, and services. The previous literature also agrees that the level of experience in using a technology is closely associated with the effect of effort expectancy (Al-Azawei & Lundqvist, 2015; Al-Azawei et al., 2017b).

In addition, contrary to the findings of other studies (Çelik, 2011; Dumpit & Fernandez, 2017), this present study indicated an insignificant relationship between subjective norms and the behavioral intention to accept Facebook. This may indicate that Facebook users in Iraq do not consider the perspectives or opinions of others (for example, family and friends) when they decide to use SNSs. According to Venkatesh et al. (2003), people alter their individual belief structure according to the effect of social pressure through identification in the case of voluntary technology use, whereas social status plays a vital role in individual decision-making when technology use is mandatory. This argument may explain our findings as to why social pressure was not a predictive factor in the present study. Another possible explanation is that social norms have a significant influence on SNS adoption in Iraq, as shown in the analysis of the original UTAUT (see Table 5). However, the other integrated variables in the proposed model had a stronger influence on behavioral intention, thus reducing the overall effect of social pressure.

Finally, this research supports Venkatesh et al.'s (2003) assumption that both facilitating conditions and behavioral intention are significant determinants of actual use of a system. Our analysis indicated that the availability of an ICTs infrastructure, the stability of the Internet bandwidth, and presence of technical support are significant in predicting users' willingness to accept SNSs. The strong relationship between people's behavioral intention to perform a certain behavior and the actual per-

formance of that behavior was upheld in this study. It is a finding that is consistent with the socio-psychological theory proposed by Ajzen and Fishbein (1980). The significant relationship between these two constructs (behavioral intention and actual behavior) is also stable across studies (Davis et al., 1989; Venkatesh et al., 2003).

THE MODERATING EFFECT OF INDIVIDUAL DIFFERENCES

Gender

Following the moderating effect of the gender divide, the results in Table 7 depict that gender divide moderates the relationship between peer support and behavioral intention (PS_BI), perceived playfulness and behavioral intention (PP_BI), and subjective norms and behavioral intention (SN_BI). Overall, other research on Facebook adoption also demonstrates that gender plays a significant role in the relationship between different variables (Shen & Khalifa, 2010).

The association between PS_BI was stronger for men than for women. This may have been due to cultural restrictions to women's public interaction (Ameen & Willis, 2018; UN Iraq, 2013). Therefore, male users may have received stronger support for Facebook use from their male friends and peers than was experienced by their female counterparts. Furthermore, the ratings for computer self-efficacy amongst male users of computers and technology were reported as higher than for female users (Terzis & Economides, 2011). This may indicate that men were more likely than women to share their experience with peers, as they had more ability to use the technology. Another research study conducted by Broos (2005) reported negative attitudes to technology and Internet use, high computer anxiety, and less experience with technology amongst women, compared to male users. Similarly, according to Li and Kirkup (2007), a higher level of technology skills and behavioral intention to use technology was reported for Chinese and British males than for their female counterparts. Moreover, research on social style and psychological differences between men and women has suggested that male friendships are more instrumental, with a greater tendency to share activities and work together on projects, whereas female friendships are usually emotional, with a greater tendency to share feelings (Moore, 1990; Riggio, 2014; Vigil, 2007). Aside from this, based on the dominant culture in Arab nations, friendships are reserved for people of the same gender and therefore, male peers are more likely than female peers to provide further support to their friends and share their personal knowledge of Facebook use. Hence, our results were consistent with such theoretical assumptions and empirical findings.

Gender also revealed a moderating effect on the relationship between PP_BI and SN_BI, with this being stronger for female than for male users. For the PP_BI association, Terzis and Economides (2011) point out that men can be more affected than women by perceived playfulness, because typical male characteristics correspond more closely to features of computer games. However, our findings were inconsistent with this assumption, because it was indicated that female Facebook users were more concerned than men about perceived playfulness. A rational explanation for this result is that Arab culture inhibits women from participating in public enjoyment and fun. Therefore, they are more likely to find this hedonic pleasure in SNSs. Pertaining to the SN_BI relationship, however, our findings agree with most of the earlier literature, where women were shown to be more likely than men to be affected by social pressure and to accept behavior that is confirmed by other people (Tarhini et al., 2014; Venkatesh et al., 2003; Wang, Wu, & Wang, 2009). This behavior that is frequently displayed by women could be due to their susceptibility to be influenced by feelings and a greater tendency to depend on the opinions of others, particularly in Arab culture (Said-Foqahaa, 2011).

Age

Looking at Table 7, age was found to moderate the relationship between family support and behavioral intention (FS_BI), whereby it affected young users (aged 30 years or under) more than others.

This means that family support was a more salient construct for younger Facebook users than it was for older users to predict their willingness to adopt SNSs such as Facebook. These results possibly indicated that younger users were still being driven by their positive perceptions of family support and encouragement. In consideration of the context of this study, young Iraqis are guided heavily by their families, unlike their counterparts in the West and this may provide rational support for our findings. Other studies also confirm the moderating effect of age on the relationships between different constructs and users' intention to accept a technology (Tarhini et al., 2014; Venkatesh et al., 2003).

Experience of using Facebook

As suggested in other studies, experience of using technology can moderate the relationship between different constructs (Tarhini et al., 2014; Venkatesh & Davis, 2000; Venkatesh et al., 2003). Experience of using Facebook had two moderating effects on the associated path between the model variables. The first was on the relationship between peer support and behavioral intention (PS_BI), which was stronger for users with a high level of Facebook experience. This suggests that support received by users from their peers can play a significant role in improving their technology experience and their decision to continue using SNSs in the future. On the contrary, less experienced users would develop their intention to use Facebook according to the hedonic pleasure that they gained from using it (PP_BI). Less experienced Facebook users were also more likely to use the social network, if they perceived it as fun and enjoyable, given that perceived playfulness was a strong predictor of the behavioral intention to use Facebook.

Academic level

The analysis showed that academic level moderated the relationship between peer support and behavioral intention (PS_BI), as well as between family support and behavioral intention (FS_BI), which was stronger for Facebook users with a BSc or postgraduate degree. These are new findings for the research on social media networks, as previous literature has not investigated this relationship. It was assumed that this influence would be stronger for educated users, because they had already perceived support from their families and peers, whereas less educated users were still seeking support. Another possible explanation for these outcomes is that family members or friends with a lower level of education may also have a low level of experience in using such technologies and, therefore, would be unable to provide adequate support for their relatives and peers. In general, educational level plays a significant role in moderating the relationship between several variables in technology acceptance theories (Venkatesh et al., 2003).

IMPLICATIONS AND LIMITATIONS

This study makes a number of contributions to theory and practice. Regarding the former, it has aimed to develop a conceptual research framework that will facilitate a thorough understanding of Facebook acceptance. This was based on UTAUT, social support theory, and intrinsic motivation theory, as well as studying the influence of a set of moderators (gender, age, experience of using Facebook, and educational level). This study also contributes to the previous literature on the effectiveness of UTAUT in different cultural contexts, although it appeared to under-perform, compared to its original results (Venkatesh et al., 2003). Thus, in contrast to most of the studies in the West that have considered the behavioral intention to accept Facebook, our research supports the reliability and validity of UTAUT in the Arab world. Another significant implication of this study is its reporting of the relevance of social support theory to Facebook adoption. Previous research has not provided evidence of the effect of this theory in the context of Facebook acceptance, whereas it has been extensively applied in work contexts and in terms of customer satisfaction. Therefore, this present study is the first to take into consideration the impact of family and peer support on the behavioral intention to use Facebook, in which both were found to be predictive variables of this intention. Moreover, this research adds to the few studies that have considered the effect of individual differ-

ences on the path proposed between the model constructs, while at the same time reporting significant differences.

The results of the present study make a practical contribution to organizations that provide SNSs. SNSs are developed in the West and this research shows that users will not adopt Facebook purely because of its usefulness; users' acceptance is in fact formed through a sequence of values, such as individual differences, psychological factors, and social and organizational beliefs. Consideration of these variables can assist in obtaining a complete picture of the phenomenon under investigation. Accordingly, social media organizations should not only consider strategies that apply to a single context; other contexts and countries where there are different beliefs, perceptions, and cultures should also be considered. Based on another practical perspective, the evidence provided here is that social support theory has a significant influence on SNSs acceptance. This may suggest that social media organizations should provide services to support this concept. Finally, perceived playfulness showed a significant impact on the intention to use SNSs and, in turn, this implied that designers and organizations should pay further attention to the entertainment services provided by social networks, in order to motivate users and improve their willingness to accept such technologies.

Regardless of many significant outcomes obtained in the present research, it was not without limitations. First, the study's subjects were Iraqi Facebook users. Therefore, caution needs to be exercised in generalizing the research outcomes to other cultures and contexts. Moreover, this was a cross-sectional study, with the data being collected at a specific point in time. In contrast, a longitudinal research design could be applied to gather data from the research sample over a longer time period to see if attitudes, beliefs, perceptions, and intentions change over the course of the study. Another limitation was that the measurement of the actual use of Facebook was based on users' self-assessment, whereas collecting data on actual use from SNSs would yield a more accurate representation of Facebook use. Finally, the overall R-square explained in the present study may indicate a need to include other constructs, such as individual experience, compatibility, and quality of working life for a more accurate prediction of the behavioral intention to adopt Facebook. Such limitations could invite further research.

CONCLUSION

The key aims of this research were to (1) understand UTAUT's ability to determine Facebook adoption, (2) highlight the role of social support theory (family support and peer support) in Facebook adoption within a non-work context, (3) examine the effectiveness of the proposed model on SNS acceptance, and (4) investigate how a combination of individual features (age, gender, experience of using Facebook, and educational level) could influence the acceptance of Facebook use in Iraq.

The main findings pointed to UTAUT as an effective theoretical model for extending our understanding of users' willingness to accept Facebook in a Middle Eastern country. Although the findings confirmed all original relationships of the associated path between the model constructs, except for effort expectancy, the overall analysis revealed only an acceptable explanation of the variance of behavioral intention and Facebook use. This provides further support for integrating other constructs to enhance the ability of this theoretical model to predict Facebook adoption.

Social support theory and perceived playfulness generated evidence of the power of these two theories to predict technology use. More specifically, the findings upheld the significant effect of social support theory on Facebook acceptance in a non-mandatory or non-work context. This represents the key contribution of the present research in comparison to the earlier literature. Social support theory has been widely studied in work contexts. However, this research focused on its impact on technology adoption in a voluntary context.

The empirical findings also highlighted a significant moderating effect of the proposed moderators on the associated paths between several constructs and the behavioral intention to use Facebook. By including the proposed variables in UTAUT and considering the impact of individual differences, it

became possible to understand how users decide to adopt Facebook. It is hoped that future research will build on the results of this work and try to provide further explanations of why users accept SNSs.

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APPENDIX: THE RESEARCH SURVEY

Peer Support (PS)	
PS1	When I am using Facebook services, my peers encourage and praise me.
PS2	When I face problems with Facebook, my peers listen and provide the emotional support I need.
PS3	While using Facebook services, if there are any problems with the computer or system, my peers come to help right away.
PS4	My peers encourage me to use Facebook services.
Family Support (FS)	
FS1	When I am using Facebook services, my family encourage and praise me.
FS2	When I face problems with Facebook, my family listen and provide the support I need.
FS3	When I use Facebook services, my family share their experience of Facebook with me, as well as any important information I need to know
Perceived Playfulness	
PP1	Using Facebook is fun for me.
PP2	Using Facebook stimulates my curiosity.
PP3	Using Facebook leads to my exploration.
PP4	Using Facebook keeps me happy.
Performance Expectancy (PE)	
PE1	I believe Facebook is a useful tool of communication.
PE2	I believe that communication via Facebook is useful.
PE3	I believe Facebook improves interaction with other people.
PE4	I believe Facebook is useful.
Effort Expectancy (EE)	
EE1	I find that all functions are easy to use, even with limited experience of using Facebook.
EE2	I find that Facebook can be used easily.
EE3	I find it is easy to do what I want on Facebook.
Subjective Norm (SN)	
SN1	My friends think that I should participate in Facebook.
SN2	My family think that I should participate in Facebook.
SN3	Generally speaking, I do what friends and family members think I should do.
Facilitating Conditions (FC)	
FC1	I have the necessary knowledge to use Facebook.
FC2	When I need any help in using Facebook, guidance is available to me.
FC3	When I need any help in using Facebook, a specific person is available to provide assistance.
Behavioral Intention (BI)	
BI1	I tend to use Facebook.
BI2	I am likely to use Facebook in the near future.
BI3	Assuming I have access to Facebook, I intend to use it.
BI4	I strongly recommend others to use Facebook.
BI5	Given that I have access to Facebook, I predict that I will use it.
Actual Facebook Use (AFU)	
AFU1	I use Facebook on a daily basis.
AFU2	I frequently use Facebook.

BIOGRAPHY



Ahmed Al-Azawei is a lecturer in the College of Information Technology, at the University of Babylon, Iraq. He undertook his PhD in Computer Science at the University of Reading, UK. His area of research focuses on learner differences, the application of e-learning, inclusive learning theories, technology adoption, Web technologies, and adaptive educational hypermedia systems. Ahmed's research aims to enhance the implementation of information and communication technologies (ICTs) in higher education in developing countries. Ahmed has published widely in international journals and presented a number of conference papers.