

An Empirical Examination of Factors Affecting Continuance Intention Towards Social Networking Sites

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Abstract. This study examines the factors that affect consumer continuance intention to use social networking sites as a business tool. Using the Technology Acceptance Model (TAM) as the theoretical framework, the researcher tested the research model and related hypotheses using structural equation modelling. The results from a survey of 304 Facebook users in Saudi Arabia indicate that trust, perceived usefulness, and perceived enjoyment had significant positive effects on behavioural intention to continue to use social networking sites. Furthermore, perceived ease of use was found to have a significant positive effect on perceived usefulness, perceived enjoyment, and trust. Discussion of the findings and research contribution as well as limitations and future research directions are presented.

Keywords: Social networking sites · E-commerce · S-commerce · TAM · Consumers · Saudi Arabia

1 Introduction

Virtual communities and Social Networking Sites (SNS) allow people to connect with each other in general or on a particular subject online [26, 32]. Recently, the number of members of online social networks has increased explosively. For example, the social networking site “Facebook” registered 1.06 billion monthly active users, 618 million daily active users, and 680 million mobile active users in December 2012 [40]. Indeed, the popularity of SNS is highly demonstrable through the huge number of people using them, as it has quickly become a new phenomenon that has transformed online communication [29]. Consequently, Saudi Arabia has witnessed the biggest growth of diffusion of social media in the Arab world, which is the strongest empowering factor to e-commerce adoption within the Kingdom of Saudi Arabia (KSA) [35]. According to [8], around 87 % of social media users covered by the survey in the Arab world are subscribed to Facebook. In Saudi Arabia, the subscription rate is 80 % of total users of Facebook, 81 % of current Facebook subscribers in KSA access the channel on a daily basis, and 76 % of social media users in KSA visit Facebook through their smart-phones and/or tablets. As a result, firms are starting to make wider use of SNS to build closer links with suppliers and customers [1, 24]. Therefore, many firms have been

creating new ways to make profitable use of SNS applications [2]. Accordingly, the development of SNS has improved a new e-commerce model called social commerce (s-commerce). The term ‘s-commerce’ is defined as a concept of Internet-based social media, which enables people to participate actively in the selling and marketing of different products and services in online marketplaces [28]. This dynamic process helps consumers obtain better information about different products and services provided by companies [22]. However, very limited empirical research has been conducted in this context [22, 28, 33, 34, 36–38], specifically in the Arab world and particularly in Saudi Arabia. Accordingly, this study aims to investigate factors affecting consumer continuance intention to use SNS as a business tool. The following sections of the paper include the relevant literature review and hypothesis development in the second section. These are followed by the methodology, data collection, as well as results and discussion outlined in the third, fourth, and fifth sections respectively. Finally, the research contribution, conclusion and limitations are delivered in sections six, seven, and eight.

2 Literature Review and Hypothesis Development

As Davis’ technology acceptance model integrates findings from the information systems literature, the model’s use became widespread in the diffusion of innovation literature. The previous studies have explained the importance of the Technology Acceptance Model (TAM). Many research studies have provided better empirical support for TAM in information technology research regardless of the country concerned i.e. [16, 22, 23, 39, 43]. Accordingly, TAM has been utilized in the Saudi Arabian context in various studies. [4] used TAM to examine biometric technology to determine user identity in e-commerce. [7] examined factors that influence the online banking adoption behaviour of 400 customers based on the TAM. [5] presented a conceptual framework that was extended from the advanced TAM to examine social media effects. [9] utilized TAM to examine consumers’ online shopping intention and risk perceptions in both Saudi Arabia and the United States. [6] extended the TAM to examine the influence of user acceptance of m-government services. [3] investigated factors influencing customers’ behavioural intention to adopt mobile services during their travel process using TAM and DOI. Finally, [8] investigated the adoption of self-service technologies by consumers in Saudi Arabia using the TAM model. In the s-commerce context, a number of studies have examined TAM in different geographical contexts; this includes the UK [21, 22], USA [38], and South Korea [34]. Accordingly, it is worthy to investigate s-commerce adoption utilizing TAM in the Saudi Arabian context.

In fact, TAM was developed for the explanation of the factors affecting computer acceptance in general rather than for a specific topic. As a result, a further modification of TAM is essential to explain consumer Behavioural Intentions (BI) to continue to use SNS. In this section, the researcher highlights the original constructs of TAM, specifically perceived usefulness (PU) and perceived ease of use (PEOU), followed by perceived enjoyment (PE) and trust (TR), which has been examined in s-commerce in other geographical contexts and found to be significant, PE [37, 38], TR [21, 22, 27, 33] and

are worth further investigation in the Saudi Arabian context. The proposed hypothesis of this study are presented:

Perceived Usefulness (PU): Perceived usefulness is defined as the degree to which a user is aware of specific information technology innovation and how it will improve his/her work performance [13]. In fact, there is widespread research in the Information Systems (IS) context that provides evidence of the significant effect of PU on BI [43]. For the present research, the proposed relationship between PU and BI is based on studies that have found perceived usefulness to have a positive effect on behavioural intention to use s-commerce [22, 33, 37, 38]. Accordingly, the following hypothesis has been formulated:

H1: Perceived usefulness will have a significant positive effect on behavioural intention to continue to use social networking sites.

Perceived Ease of Use (PEOU): Perceived Ease Of Use refers to the degree to which the users' expectations about using information technology innovations would be free of effort [13]. Over the past decade, much research has provided evidence of the significant effect of PEOU on BI, either directly or indirectly through its effect on PU [13, 43]. Furthermore, other studies have found the PEOU to have a significant effect on Perceived Enjoyment (PE) as well as Trust (TR). In the context of SNS acceptance and adoption, [34] found that PEOU has a significant effect on BI. In contrast, [21] found the effect of PEOU on IB to be non-significant. Furthermore, few studies have found that PEOU has a significant positive effect on PU [21, 34, 39]. Additionally, other studies in the literature found that PEOU has a significant positive effect on PE [11, 12]. Finally, a number of studies have integrated trust to the TAM [19, 31, 34] and found the PEOU has a significant positive affect on Trust [30]. By extending the results of this study, the author proposes the following hypotheses for SNS intention of continuous usage:

H2: PEOU will have a significant positive effect on behavioural intention to continue to use social networking sites.

H3: PEOU will have a significant positive effect on perceived usefulness of social networking sites.

H4: PEOU will have a significant positive effect on perceived enjoyment of social networking sites.

H5: PEOU will have a significant positive effect on the Trust of social networking sites.

Perceived Enjoyment (PE): In this study, the researcher defines PE as the degree to which a person believes that using social networking sites for business purposes will be associated with enjoyment. If the user can enjoy the adoption of new technology, his attitude toward the adoption will be more positive than if that same technology was not enjoyable. Several studies on PE have indicated that PE significantly affects intention to use a technology [14, 39, 41, 42]. Previous studies of s-commerce have empirically added PE to the TAM [38]. Furthermore, limited studies in the context of s-commerce

have found that PE has a significant positive effect on BI [36, 38]. In contrast, [37] found the relationship to be non-significant. Therefore, we hypothesize that:

H6: Perceived enjoyment will have a significant positive effect on behavioural intention to continue to use social networking sites.

Trust (TR): [19] defined trust as “an individual willingness to depend based on the beliefs in ability, benevolence, and integrity”. According to [18, 19], trust is a key feature to enable e-commerce and is linked to uncertainty in most economic and social transactions. Furthermore, trust has a direct effect on online buying intention and on reducing uncertainty in e-commerce sites. Various studies on e-commerce adoption found trust to be a key aspect of e-commerce adoption [18, 27, 28, 30, 31]. This feature needs additional consideration in cyberspace, as customers and e-vendors are not face-to-face. However, the development of s-commerce and SNS can help improve customers’ trust. Customers on SNS can support each other virtually with their ratings, reviews, and recommendations. In the context of s-commerce, some studies have found that trust has a significant positive effect on behavioural intention [21, 22, 27, 33]. Accordingly, the following hypothesis has been formulated:

H7: Trust will have a significant positive effect on behavioural intention to continue to use social networking sites.

3 Methodology

This study utilized scale items derived from the literature of technology adoption in order to measure the selected variables; i.e. Perceived Enjoyment and Trust, in addition to other variables adopted from the TAM. To do that, several items were used in order to measure the variables of the TAM which were adapted from [13]. Additionally, perceived enjoyment items have been adopted from [10]. Furthermore, Trust items were selected from [19, 25, 27, 34]. The degree of responses was estimated using the seven-point scale, ranging from ‘strongly agree’ to ‘strongly disagree’. In regard to the language of the data collection tool, the questionnaire was translated into Arabic to overcome cultural and linguistic differences [9]. A pilot study was then conducted using 15 questionnaires that were distributed to Facebook users in Saudi Arabia who were asked to give their feedback in case they faced any difficulties in answering the questionnaire [20]. Accordingly, the questionnaire’s items were rechecked in terms of clarity, language simplicity, and length.

When it came to the sampling, this study implemented a convenience sampling, as the researcher does not have a list of Facebook users. Moreover, convenience sampling is cost-effective [15, 17], and the results of a convenience sample can be generalised more appropriately since it allows for the presence of a variety of profiles and characters of potential users [17]. The survey questionnaires were distributed as online web links using the online survey software Qualtrics. The web link was sent to different Saudi Arabian e-commerce groups on Facebook as this was the most popular SNS to examine users’ intentions rather than non-users. Due to space constraints, scale items cannot be provided in the paper but will be available upon request.

4 Data Collection

The demographic details show that 59.2 % of the respondents were female, while 40.8 % were male respondents. In regard to the respondents' age, the descriptive statistics demonstrate that the largest age population was within 21–29 years old with 62.5 %, followed by the age group of ≥ 18 –20 with 18.8 %. The rest of the respondents were divided among the age groups of 30–39 (11.8 %) and 40–49 (6.9 %), with no respondents aged 50 and above. In regards to educational level, the majority of the respondents hold a Bachelor's degree, representing 49.0 % of the total sample. The second largest group were high school graduates (34.5 %) followed by 10.2 % post-graduates and 5.9 % diploma holders. A very small percentage of respondents held less than high school qualification (0.3 %). Table 1 shows the demographic details of the respondents in the survey sample.

Table 1. Respondents' profile and characteristics

Variable	Group	Frequency	Percent
Gender	Male	124	40.8
	Female	180	59.2
	Total	304	100.0
Age	≥ 18 –20	57	18.8
	21–29	190	62.5
	30–39	36	11.8
	40–49	21	6.9
	50 and above	0	0.0
	Total	304	100.0
Education	Less than High School	1	0.3
	High School	105	34.5
	Diploma	18	5.9
	Bachelor's degree	149	49.0
	Postgraduate	31	10.2
	Total	304	100.0

5 Results and Discussion

5.1 Validation of the Measurement Model

A confirmatory factor analysis was conducted to assess the validity of the measurement model using AMOS 22.0. To examine the overall model fit for the CFA and SEM, GOF indices were reported for this study; each of them describes the model fit from a different perspective. In the first run, most of the GOF indices fit the data well. The normed chi-square was (2.115), the GFI (.910), the AGFI (.877), NFI (.907), and RMSEA (.061):

Table 2. Summary of fit indices for the measurement model

	χ^2	Df	χ^2/df	GFI	AGFI	CFI	NFI	RMSEA
Criteria			3:1	≥ 0.9	≥ 0.8	≥ 0.95	≥ 0.9	< 0.07
1 st run	264.341	125	2.115	.910	.877	.948	.907	.061
2 ^{ed} run	204.553	120	1.705	.929	.899	.968	.928	.048

χ^2 : chi-square, df: degrees of freedom, χ^2/df : normed chi-square, GFI: goodness-of-fit, AGFI: adjust goodness-of-fit, CFI: comparative fit index, NFI: normed fit index, RMSEA: root mean square error of approximation.

all in the acceptable benchmarks; yet, the CFI was slightly lower than the acceptable range (.948). To improve the model fit, the modification indices were checked in AMOS 22.0. Accordingly, PEOU2 and PEOU4 were correlated, and PEOU3 and PEOU4 were correlated as well. Additionally, TR1 and TR2, TR2 and TR3, and TR3 and TR4 were correlated. This indicated a good fit in the second run (χ^2/df : 1.705; GFI: .929; AGFI: .899; CFI: .968; NFI: .928; RMSEA: .048). Table 2 shows the results.

5.2 Item Reliability, Internal Consistency, and Discriminant Validity

After the validation of the measurement model, to evaluate the reliability and validity of the research model, item reliability, internal consistency, and discriminant validity were examined [20]. Item reliability was measured using factor loadings. Item reliability is considered practically significant if each factor loading exceeds 0.5 [20]. The results of the item reliability show that all the examined items exceeded the threshold ranging from .640 (PEOU3) to .904 (PE2). This suggests that the survey tool was appropriate for evaluating each construct individually. The researcher used Cronbach's alpha for evaluating internal consistency. [20] suggested that Cronbach's alpha should exceed 0.7 for sufficient construct reliability. The results of the analysis show that Cronbach's alpha exceeds this threshold, ranging from .779 to .889. Table 3 shows the results for item reliability and internal consistency.

Lastly, discriminant validity was measured using the average variance extracted (AVE). For sufficient discriminant validity, the square root of each of the AVE's constructs should exceed its correlation with any other construct [20]. Table 4 reveals sufficient discriminant validity by indicating that the correlation of each construct does not exceed the square root of its AVE.

5.3 Structural Model Assessment

Structural Equation Modeling (SEM) was utilized for testing hypotheses using AMOS 22.0. This approach produces two vital pieces of information that are used to indicate how well the structural model can predict the hypothesized relationships. Namely, the standardized path coefficients estimate (β) assesses the strength of the causal relationship between two constructs, and the squared multiple correlations (R^2) measure the percentage of the predictive power of the dependant construct [20]. As shown in Table 5,

Table 3. Reliability test for investigated constructs (Cronbach’s alpha)

Construct	Item	Mean	Std. Deviation	Factor Loading	Cronbach’s alpha
Perceived Usefulness	PU1	5.56	1.368	.730	.779
	PU2	5.61	1.277	.766	
	PU3	5.34	1.419	.702	
Perceived Ease of Use	PEOU1	5.40	1.463	.683	.789
	PEOU2	5.26	1.370	.729	
	PEOU3	5.50	1.442	.640	
	PEOU4	5.36	1.509	.712	
Perceived Enjoyment	PE1	5.60	1.468	.810	.867
	PE2	5.65	1.395	.904	
	PE3	5.54	1.444	.785	
Trust	TR1	4.50	1.774	.643	.843
	TR2	4.59	1.581	.664	
	TR3	4.46	1.709	.800	
	TR4	4.43	1.628	.756	
	TR5	5.05	1.501	.671	
Behavioural Intention	BI1	5.29	1.432	.833	.889
	BI2	5.13	1.496	.836	
	BI3	5.15	1.530	.895	
Valid N (listwise) 304					

Table 4. Results for discriminant validity

	PU	PEOU	PE	TR	BI
PU	0.812				
PEOU	.431**	0.798			
PE	.446**	.527**	0.910		
TR	.381**	.286**	.332**	0.830	
BI	.510**	.469**	.550**	.513**	0.925

Square root of AVE is shown on the diagonal in **bold**.

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

Table 5. Summary of fit indices for the structural model

	X ²	Df	X ² /df	GFI	AGFI	CFI	NFI	RMSEA
Criteria			3:1	≥ 0.9	≥ 0.8	≥ 0.95	≥ 0.9	< 0.07
Model GOF	224.978	125	1.800	.923	.895	.963	.921	.051

χ²: chi-square, df: degrees of freedom, χ²/df: normed chi-square, GFI: goodness-of-fit, AGFI: adjust goodness-of-fit, CFI: comparative fit index, NFI: normed fit index, RMSEA: root mean square error of approximation.

The results of the structural model indicate a good fit for all indices (X^2 : 224.978; df: 125; X^2/df : 1.800; GFI: .923; AGFI: .895; CFI: .963; NFI: .921; RMSEA: .051).

As the structural model indicated a good fit, the proposed hypotheses were examined using standardized path coefficients (β). As presented in Table 6, all the proposed hypotheses are supported except H2. First, PU had a significant positive effect on Behavioural Intention ($\beta = .28, p < 0.001$), providing support for H1 and confirming the effect of the PU of SNS on consumers' continuous intention to use the technology. Second, PE had a significant positive effect on behavioural intention. The path coefficient between PE and BI was .27 ($p < 0.001$), providing support for H3 and suggesting that consumers who enjoy using SNS for business purposes intend to continue to use the technology in the future. Third, Trust had significant positive effects on behavioural intention to continue to use SNS. The path coefficient between TR and BI was .34 ($p < 0.001$), providing support for H4 and suggesting that consumers who trust SNS for business purposes intend to continue to use the technology in the future. Furthermore, PEOU had significant positive effects on PU, PE, and TR. The standardized path coefficients between perceived ease of use and these three constructs were 0.62 ($p < 0.001$), 0.67 ($p < 0.001$), and 0.43 ($p < 0.001$), respectively. As a result, H5, H6, and H7 are supported. The hypothesis suggests that consumers who finds SNS easy to use for business purposes are more likely to perceive it as useful, enjoyable, and trustworthy. Finally, PEOU had no significant effect on BI ($\beta = .11, p = .237$), providing no support for H2. This finding suggests that consumers are already familiar with using SNS as a business tool. Accordingly, ease of use dose not predict behavioural intention to continue to use the technology.

PU, PE, and TR explained approximately 56 % of the variance in behavioural intention to continue to use SNS for business purposes. Furthermore, PEOU explained 45 % of the variance in PE, and 39 % of the variance in PU. Finally, PEOU explained 18 % of the variance in TR. Table 6 summarizes the results of the tested hypotheses.

Table 6. Summary of hypotheses test

H#	Hypothesis		β	S.E.	C.R.	P	Supported
	Dependent Variable	Independent Variable					
H1	PU	BI	.28	.090	3.643	***	YES
H2	PEOU	BI	.11	.110	1.182	.237	NO
H3	PEOU	PU	.62	.083	7.630	***	YES
H4	PEOU	PE	.67	.096	8.402	***	YES
H5	PEOU	TR	.43	.096	5.647	***	YES
H6	PE	BI	.27	.074	3.591	***	YES
H7	TR	BI	.34	.056	5.607	***	YES

6 Research Contribution

The results of this study provide both academic and practical implications. In fact, the current study makes a significant contribution for academics by proposing the TAM model for examining the adoption of s-commerce technologies, which is a novel modern technology. Furthermore, the study also expanded the applicability of TAM by focusing on a new cultural context (Saudi Arabia). Finally, this study is able to extend the theoretical horizon of the TAM by including other external factors from the technology adoption literature, including Perceived Enjoyment and Trust. In practice, the proposed model provides business owners, managers, and marketers in developing countries understanding of continuous intention to use s-commerce technologies. It provides a suitable approach to define which factors require further attention in order to obtain the highest benefits from the adoption of s-commerce technologies by ensuring that consumers continue to accept the modern way of interacting via social media platforms to conduct business. Based on the proposed model, business owners, managers, and marketers need to pay closer attention to some issues, particularly the finding that the most significant predicted constructs of behavioural intention to continue to use SNS is Trust. This means that business owners, managers, and marketers need to pay closer attention to build online trust with consumers, by connecting with them and providing online privacy and security policy, as well as encouraging user ratings, reviews, and recommendations on SNS to develop user generated content, which will lead to consumer trust. Furthermore, perceived ease of use was found to be a strong predictor of perceived enjoyment as well as perceived usefulness. This means that business owners, managers, and marketers need to ensure that the SNS they are using to connect with their consumers are easy to use, and as a result, consumers will enjoy using the SNS to conduct business, and find them useful in their daily lives.

7 Conclusion

This study aims to identify the important factors that influence customer behavioural intention to continue to use social networking sites. The TAM has been identified as a suitable theoretical foundation for proposing a conceptual model. The study has added two further significant factors, perceived enjoyment and trust, along with TAM constructs to formulate the model. In order to accomplish the study's objectives, a quantitative field survey was circulated to obtain data from a convenience sample of Saudi customers and a self-administered questionnaire used for data collection, before the respondents' profile and characteristics were presented. Next, the study results and discussion was offered, including validation of the measurement model, item reliability, internal consistency, and discriminant validity for the investigated variables. Finally, structural model assessment and hypothesis testing was conducted. The findings indicated that trust, perceived usefulness, and perceived enjoyment play a significant role in behavioural intention to continue to use social networking sites.

8 Limitations and Future Research Directions

This study is limited in that the researcher views the behavioural intention of consumers of SNS rather than the consumers actual use. Future research should be conducted on consumers' actual usage behaviour within the context of social networking sites. Additionally, this study could be further strengthened to better understand the relationships between variables. Future research could explore new additional constructs to better predict the intention and actual use of SNS. Furthermore, the population of the study limits this research. As the respondents resided in Saudi Arabia, the results might not be generalizable to other populations. Accordingly, future research needs to investigate other cultures. Finally, this study did not measure how frequently the respondent consumers made use of SNS. Therefore, future research should aim to determine how often consumers participate in SNS and to what extent it motivates their purchasing decisions.

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