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# Consumers' Perceptions of Social Commerce Adoption in Saudi Arabia

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**Abstract.** This study aims to examine the factors that affect consumer adoption of social commerce technologies in the context of Saudi Arabia. The factors descriptively explored in this research include: performance expectancy, effort expectancy, social influence, hedonic motivation, habit, trust, consumer innovativeness, information quality and behavioural intention. The survey data utilised in this research was collected through a self-administered questionnaire within a convenience sample. The results obtained through a descriptive analysis confirmed that Saudi consumers perceive the abovementioned factors as important and they have strong behavioural intention to use social commerce technologies.

**Keywords:** social media, social commerce, customer, UTAUT2, adoption, Saudi Arabia.

## 1 Introduction

Social media plays an important part in the countries' economic development [23] as it offers novel ways for both organisations and customers to link with each other. Businesses began to embrace social media websites as a technique to improve communication, information sharing, and collaboration by applying many innovative and vital business practices [34]. Social media motivated companies to work faster by creating and operating more interdependencies in global markets [1]. Therefore, the development of social media has enhanced a new e-commerce model named social commerce. The term of social commerce is defined as a concept of Internet-based social media that allows people to contribute actively in the selling and marketing of diverse products and services in online marketplaces [20]. This dynamic process assists consumers to get better information about different products and services delivered by companies [15].

Saudi Arabia has witnessed the biggest growth of diffusion of social media platforms, which is the strongest supporting factor to e-commerce adoption within the country [9]. Many large businesses, as well as small companies and new ventures, have set-up their organisations and group profiles on Facebook, LinkedIn and other similar websites. In fact, Saudi Arabia ranks the second in the Arab countries, after Egypt, for registering 5,240,720 Facebook users [5]. In addition, Saudi Arabia represents the largest percentage of Twitter users with around 830,300 users or 38% of total

adfa, p. 1, 2011.

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Arab users [5]. Moreover, statistics have revealed that Saudi Arabia has contributed 90 million video views per day. This is the maximum number of YouTube viewings worldwide per Internet user [9]. These amazing evidences have created a new background for business owners, managers, and marketers to reach their potential consumers. However, even though consumers in other countries such as Hong Kong, China, South Korea, and Thailand apply online shopping activities actively, mostly Saudi consumers use online social media simply to help them make buying decisions [3]. The remaining sections of the paper include the relevant literature review and theoretical basis in the third section. These are followed by the methodology, results, and discussion outlined in the fourth, fifth and sixth sections, respectively. Finally, the research contribution, conclusion and limitations are delivered in section seven eight, and nine.

## **2 Literature Review**

Limited empirical studies have been conducted within this context of social commerce as it is still new. [14, 15] extended the Technology Acceptance Model (TAM) to measure social commerce adoption by consumers. The researcher examined some components of social commerce that affected consumers' intention to buy. The model tested ratings and reviews, referrals and recommendations, and forums and communities aiming to help to introduce new business plans for e-vendors. The study also indicated that trust is a continuing issue in e-commerce and can be examined in social commerce constructs. The researcher collected survey data and applied structural equation modelling (SEM) for analysis. The results pointed out that perceived usefulness and forums and communities have a positive impact on trust. In addition, the findings showed that trust has a significant effect on intention to buy [14, 15].

In the context of Saudi Arabia, Only two studies have been found that focused on the use of online social media to help overcome e-commerce adoption barriers. [4] presented research that is designed to demonstrate a conceptual framework by extending it from TAM. The framework aims to examine social media effects and perceived risk as the moderating effects between purchasing intention and an actual online purchase in Saudi Arabia. Furthermore, [17] evaluated the effectiveness of online social networking by entrepreneurs in the Arabian Gulf including Bahrain, Kuwait, United Arab Emirates, Saudi Arabia, Qatar, and Oman. The research used a qualitative approach by interviewing a sample size of 50 business entrepreneurs in the Arabian Gulf who used online social networks as a method of promoting their products. The study found that online social networks are a cheap and easy method of advertising and would give all entrepreneurs a better chance of reaching their target market as well as succeeding in their ventures. In addition, entrepreneurs can now target their markets using online social networks. Moreover, social networking websites allow businesses to introduce their products to different market segments, with a low chance of failure and low expense. Finally, the researchers added that the rise in web-based social interaction can change the way businesses operate in the future. Finally, empirical studies conducted in the context of social commerce are very limited, which this study aims to address. This study proposes a new model that can be developed and extended

by applying more recent and comprehensive technology adoption theories as well as adding other more appropriate constructs especially in the consumer context.

### **3 Theoretical Basis**

In order to explain social commerce adoption effectively from the customers' perspective, the conceptual model should provide a clear image of social commerce features. From the analysis of the common theories in the field of technology acceptance, [31, 33] developed the Unified Theory of Acceptance and Use of Technology (UTAUT) by merging eight IT acceptance models. The UTAUT has four main constructs including performance expectancy, effort expectancy, social influence, and facilitating conditions that influence behavioural intention to use a technology and usage behaviours. UTAUT was capable to explain around 70 per cent of the variance of behavioural intention and around 50 per cent of the variance of use behaviour [31, 33]. Recently, [32] proposed an additional three constructs to the original UTAUT model including hedonic motivation, price value, and habit. [32] claimed that the suggested additions to UTAUT2 present major changes in the variance described in behavioural intention and use behaviour especially within the consumers' context.

Considering the limits of the earlier investigated constructs for social commerce adoption [14, 15], UTAUT2 is more suitable in the context of this study. This is because UTAUT2 was developed on UTAUT, which has been credited as the most parsimonious and comprehensive predictive model [31, 32]. Furthermore, UTAUT2 is proposed mainly for explaining technology acceptance from the customers' contexts other than the organisational use [32]. Besides, the UTAUT2 has investigated factors influencing users' acceptance of iPad phones [16], mobile payment uses [29], and mobile learning acceptance [19] that shares similar technological characteristics with social commerce. As a result, the UTAUT2 has been selected as the theoretical foundation of the proposed conceptual model in order to understand the antecedents of customers and their preference to buy from social media websites, in a new cultural context (Saudi Arabia). This shadows [32] the suggestion that future research should apply UTAUT2 in diverse countries. This also follows the call by [32] for future research to investigate the UTAUT2 on different technologies. Furthermore, to be consistent with the recommendations of [32], other external factors (trust, consumer innovativeness, and information quality) will be measured along with UTAUT2 constructs (performance expectancy, effort expectancy, social influence, hedonic motivation, habit) in the same conceptual model. These other constructs have been developed according to the literature review.

Furthermore, discard the two independent variables facilitating condition and price value and the dependent variable use behaviour which are considered a part from UTAUT2 model's constructs. Discarding both independent variables is a logical step as social commerce use does not need any technical infrastructure support as in system adoption; apart from the Internet cost, there is no monetary cost for using social media because most of the time, wireless connections are available free of charge. Thus, discarding the dependent variable use behaviour is because the literature indicated that social commerce technologies are new in the Arabian Gulf generally and in

Saudi Arabia specifically and they are still not fully used [2]. The suggested constructs are demonstrated below in Table1:

<b>Constructs Examined</b>	<b>Definition</b>
Performance Expectancy	“The degree to which an individual believes that applying the technology will help him or her to gain in job performance” [31].
Effort Expectancy	“Extent of ease connected with the use of system” [31].
Social Influences	“The extent to which an individual perceives that important others believe he or she should apply the new system” [31].
Hedonic Motivation	“The feeling of cheerfulness, joy, and enjoyment, which is stimulated by applying technology” [32].
Habit	“The extent to which, people tend to perform behaviours automatically because of learning” [32].
Trust	“Individual willingness to depend based on the beliefs in ability, benevolence, and integrity” [12]
Consumers’ Innovativeness	“The degree to which the individual is willing to adopt innovations such as goods and services or new ideas without communicating with others’ previous purchasing experience” [24]
Information Quality	“The consumers’ general perception of the accuracy and completeness of website information as it relates to products and transactions” [21].
Behavioural Intention	“The extent to which an individual intends to adopt the technology in the future” [31].

**Table 1. Description of factors**

#### **4 Methodology**

This study utilised a total of thirty-six scale items that were derived from the literature of technology adoption in order to measure the selected variables; i.e. Trust, consumers’ innovativeness and information quality in addition to other variables in the UTAUT2 model. To do that, it is vital to make items that will help in measuring the characters of the related variants. Several items were used in order to measure the variables of the UTAUT2 which were adapted from [32]. The additional variables have used items that were adopted by a number of writers. Therefore, trust was selected from [12, 18, 26, 21]. In addition, this paper selected the consumer innovativeness items from [27]. Furthermore, information quality items have been adopted from [21]. The degree of responses was estimated using the seven-point scale ranging from strongly agree to strongly disagree. In regards to the language of the data collection tool, the questionnaire was translated into Arabic to overcome the cultural and linguistic differences [6]. Then, a pilot study was conducted using 20 questionnaires that were distributed to Saudi social media users who were asked to give their feedback in case faced any difficulties in answering the questionnaire [10]. 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 social commerce potential users. Additionally, convenience sampling is cost-effective [10, 11]. Furthermore, the results of a conven-

ience sample can be generalised more appropriately since it allowed for the presence of a variety of profiles and characters of potential users [11]. The population that was going to be sampled were all from the regions of Saudi Arabia including big cities and small towns. This has been achieved by distributing the survey questionnaires with both hard copies and online as web links. In the hard copy survey, most of the respondents of the questionnaires were students, as the questionnaires were distributed to distance-learning students in the Management School at King Abdul-Aziz University in Jeddah. The students were present for two weeks at the university campus for the final exams. The researcher took the chance to distribute the survey to students. Distance-learning students enrolled in the programme are from different regions of the Kingdom including large cities and small towns; there were different age groups; and from both genders. Therefore, they were representative of the diverse population of Saudi Arabia. In the soft copy of the survey, the researcher used the online survey software Qualtrics for distributing the web-based survey. The web link was sent to different Saudi Arabian e-commerce groups on social media such as social networking sites including Facebook and LinkedIn; as well as the micro blogging service such as Twitter. Due to space constraints scale items/measurements cannot be provided in the paper but will be available upon the request.

## **5 Results**

### **5.1 The response rates**

As mentioned earlier, the survey questionnaires were circulated in both hard copies and online as web links. In the hard copy survey, participation was completely voluntary. Respondents were requested to complete a questionnaire based on their perception and/or acceptance of social commerce. A total of 700 survey questionnaires were distributed and the returned completed surveys were 417 with a 59 per cent response rate. In the soft copy of the survey, the researcher used the online survey software Qualtrics for distributing the web-based survey. One of the features the online survey software Qualtrics provided was that it showed how many respondents started the survey, but did not complete it. The total number of consumers who participated in the survey was 225. The total number of consumers who completed the survey was 120, with a response rate of 53 per cent. As a result, a total of 537 survey questionnaires were collected from both the paper-based survey and web-based survey. The questionnaires were carefully checked before entering the data using SPSS 22.0. Out of the 537 questionnaires collected, only 507 were used; 27 were considered unusable and discarded due to the huge amount of missing data resulting from missing pages or incomplete sections. In addition, three questionnaires were also discarded due to them having the same answer to all questions. These responses were considered as invalid, and they were removed in the data-editing process stage [28].

### **5.2 Respondents' Profile and Characteristics**

When it comes to respondents' profile and characteristics, this research adopts the following demographic information: gender, age, and education (see Table 2). The demographic details of the main survey sample show that the majority of the respondents were female, forming 65.1% of the whole sample, while males are represented by only 34.9%. In regard to the respondents' age, the descriptive statistics demonstrate that the largest age population was within 21-29 years old with 62.7%, followed by the age group of  $\geq 18-20$  with 17.9%. The rest of the percentages were divided among the age group of 30-39 (13.4%) and 5.5% for those who were between 40-49, whereas the smallest percentage was 0.4% as only two respondents were at the age of 50 and above. Regarding the educational level, the majority of respondents hold a Bachelor's degree, representing 45.0% of the total sample. The second largest group were high school holders (38.9%) followed by 10.5% as postgraduates and 5.5% as diploma holders. A very small percentage of respondents held less than high school qualification with (0.2%). Table 2 shows the demographic details of the respondents in the main survey sample.

Variable	Group	Frequency	Percent
Gender	Male	177	34.9
	Female	330	65.1
	<b>Total</b>	<b>507</b>	<b>100.0</b>
Age	$\geq 18-20$	91	17.9
	21-29	318	62.7
	30-39	68	13.4
	40-49	28	5.5
	50 and above	2	0.4
	<b>Total</b>	<b>507</b>	<b>100.0</b>
Education	Less than High School	1	0.2
	High School	197	38.9
	Diploma	28	5.5
	Bachelor's degree	228	45.0
	Postgraduate	53	10.5
	<b>Total</b>	<b>507</b>	<b>100.0</b>

**Table 2. Respondents' Profile and Characteristics**

### 5.3 Descriptive Analysis and Normality Assumption

According to Table 3 below, the descriptive statistics show that there are three items devoted to measure consumers' perceptions on performance expectancy (PE). PE2 achieved the highest mean score of 5.61 ( $\pm 1.302$ ). In contrast, the lowest mean was 5.36 ( $\pm 1.436$ ) as a value recorded for PE3. There are four items identified on effort expectancy (EE). As seen, the largest mean scores were 5.56 ( $\pm 1.430$ ) for EE3 and the lowest mean is for EE2, 5.24 ( $\pm 1.445$ ). Social influence (SI) was measured by three items. The highest mean scores were 5.09 ( $\pm 1.487$ ) for SI3 and 4.79 ( $\pm 1.600$ ) for SI2 followed by 4.47 ( $\pm 1.678$ ) for SI1 as the lowest mean. Moreover, there are three items allocated to measuring consumers' perceptions on hedonic motivation (HM). The highest mean value is 5.63 ( $\pm 1.382$ ) recorded for HM2, while the lowest mean value is 5.55 ( $\pm 1.505$ ) recorded for HM1. Habit (HT) was measured by four

items with 4.79 as the highest score recorded for HT3 and the lowest mean value is 4.15 for HT2. Table 3 also shows that there are five items identified to measure consumers' perceptions on trust (TR). TR5 had the largest mean value of 4.91 ( $\pm 1.536$ ) compared to TR1 that had the lowest mean score of 4.33 ( $\pm 1.826$ ). In addition, six items were identified to measure consumers' perceptions on consumer innovativeness (CI). CI3 recorded the highest value with 5.48 ( $\pm 1.521$ ). In contrast, the lower score recorded was for CI6, 4.66 ( $\pm 1.679$ ). Finally, three items were adopted to measure the behavioural intention (BI) construct. The lowest mean was for BI2 with a value of 5.05 ( $\pm 1.534$ ) while the highest mean score was 5.28 ( $\pm 1.479$ ) for BI1.

Screening the data for assessing the variables normality is a crucial step in the analysis [13, 22, 30]. Normality means the shape of normal distribution of metric variable and its correspondence [13]. Normality of a single variable can be measured statistically or graphically [7, 25, 30]. The failure to achieve normality can result from invalid statistical tests. This study has tested skewness and kurtosis at the item level. Skewness refers to the symmetry of distribution; the test indicates if the distribution is shifted or unbalanced to one side [30]. There are two types of skewness: positive skewness, when the distribution is shifted to the left; and negative skewness when it is shifted to the right [13]. Kurtosis refers to the peakness of distribution [30]. Peaked distributions are termed leptokurtic, whereas, flatter distributions are termed platykurtic. The values of skewness and kurtosis are zeroes when variables have normal distributions. Consequently, positive or negative values indicate a deviation from normality. The range of values for suitable deviations is affected by sample size. In small samples less than 30, slight deviations can be serious, whereas with large sample sizes with more than 200 it can be ignorable [13]. On the other hand, the most generally acceptable critical value for kurtosis and skewness distribution is  $\pm 2.58$  [13]. Table 3 indicates that skewness and kurtosis variables fall within the acceptable range.

Constructs	Descriptive Statistics							
	Items	N	Mean	Std. Deviation	Skewness		Kurtosis	
					Statistic	Standard Error	Statistic	Standard Error
Performance Expectancy (PE)	PE1	507	5.56	1.333	-.861	.108	.583	.217
	PE2	507	5.61	1.302	-1.126	.108	1.389	.217
	PE3	507	5.36	1.436	-.707	.108	-.032	.217
Effort Expectancy (EE)	EE1	507	5.46	1.440	-.891	.108	.468	.217
	EE2	507	5.24	1.445	-.769	.108	.210	.217
	EE3	507	5.56	1.430	-1.137	.108	1.091	.217
	EE4	507	5.33	1.539	-.936	.108	.303	.217
Social Influence (SI)	SI1	507	4.47	1.678	-.428	.108	-.417	.217



	SI2	507	4.79	1.600	-.443	.108	-.437	.217
	SI3	507	5.09	1.487	-.652	.108	-.048	.217
Hedonic Motivation (HM)	HM1	507	5.55	1.505	-1.121	.108	.887	.217
	HM2	507	5.63	1.382	-1.109	.108	1.113	.217
	HM3	507	5.56	1.422	-.857	.108	.144	.217
Habit (HT)	HT1	507	4.65	1.720	-.377	.108	-.615	.217
	HT2	507	4.15	1.892	-.191	.108	-.956	.217
	HT3	507	4.79	1.536	-.341	.108	-.727	.217
	HT4	507	4.71	1.776	-.514	.108	-.598	.217
Trust (TR)	TR1	507	4.33	1.826	-.293	.108	-.855	.217
	TR2	507	4.45	1.652	-.287	.108	-.577	.217
	TR3	507	4.37	1.737	-.288	.108	-.766	.217
	TR4	507	4.38	1.612	-.260	.108	-.590	.217
	TR5	507	4.91	1.536	-.550	.108	-.162	.217
Consumer Innovativeness (CI)	CI1	507	5.16	1.542	-.672	.108	-.038	.217
	CI2	507	5.39	1.484	-.920	.108	.532	.217
	CI3	507	5.48	1.521	-1.010	.108	.501	.217
	CI4	507	4.94	1.688	-.608	.108	-.366	.217
	CI5	507	4.71	1.584	-.384	.108	-.409	.217
	CI6	507	4.66	1.679	-.377	.108	-.561	.217
Information Quality (IQ)	IQ1	507	4.92	1.496	-.324	.108	-.446	.217
	IQ2	507	5.41	1.327	-.596	.108	-.058	.217
	IQ3	507	4.72	1.568	-.435	.108	-.266	.217
	IQ4	507	4.91	1.461	-.415	.108	-.215	.217
	IQ5	507	4.81	1.435	-.309	.108	-.367	.217
Behavioural Intention (BI)	BI1	507	5.28	1.479	-.641	.108	-.060	.217
	BI2	507	5.05	1.534	-.551	.108	-.227	.217
	BI3	507	5.12	1.552	-.577	.108	-.315	.217
Valid N (listwise) 507								

**Table 3. Descriptive and Normality Tests**

## 6 Discussion

The presented descriptive results in this study help to visualise what the data revealed. After overviewing the literature review of the studies that have used IS theories to examine social commerce adoption, only one study has used the TAM model [14, 15]. As a result, this study adopted the UTAUT2 variables as a more recent and comprehensive technology adoption theory. Other more suitable constructs were added especially in consumer context (trust, consumer innovativeness, and information quality). Furthermore, this study has identified items to test the proposed variables, which has been examined in previous research in the literature. By collecting empirical data from 700 paper-based survey participants and 225 web-based survey participants, the study identified 507 valid participants response. The findings provided a summary regarding the response rate, respondents' profile and characteristics, and a descriptive analysis and normality tests.

Regarding the descriptive analysis of the measurement items, the standard deviation is used to quantify the amount of variation or dispersion of the examined data values. When the standard deviation is close to 0, it indicates that the data points lean very close to the mean of the examined data values, but a high standard deviation shows that the data is spread over a wider range of values [8]. In other words, the low value of standard deviation reflects that there is a high certainty that most of the participants have similar views towards the variable. In this study, the average mean and standard deviation of all examined variables were in their recommended level. In addition to the normality test, Table 3 indicates that skewness and kurtosis variables fall within the acceptable range. As a result, it seems that the items of PE, EE, SI, HM, HT, TR, CI, IQ and BI were able to capture a high average mean with a suitable normality test results. Accordingly, it is worth stating that the majority of the survey questionnaire's respondents positively perceive the aspects associated to these constructs. Therefore, future research should take this into consideration so that the significance level of the dependent constructs over the behaviour intention to use social commerce can be examined; this will certainly guide the Saudi organisations to give more consideration towards the most significant factors that affects consumers to use social commerce technologies.

### 6.1 Research Contribution

The current study makes a significant contribution by proposing the UTAUT2 model for examining the adoption of social commerce technologies, which is a novel modern technology. Furthermore, the study also expanded the applicability of UTAUT2 by focusing on a new cultural context (that is: Saudi Arabia). Finally, this study is able to extend the theoretical horizon of UTAUT2 by including other external factors from the technology adoption literature.

## 7 Conclusion

This study aims to identify the important factors that influence the adoption of social commerce by Saudi customers. UTAUT2 has been identified as a suitable theoretical foundation for proposing a conceptual model. The study has added other significant and frequently used factors (trust, consumer innovativeness, and information quality) along with UTAUT2 constructs to formulate the model. In order to achieve the study's objectives, a quantitative field survey was conducted to obtain data from a convenience sample of Saudi customers; the data collection used a self-administered questionnaire. Finally, the researcher did a descriptive analysis for each one of the investigated variables. The findings indicated that these factors play a significant role in the behavioural intention for the participants.

### 7.1 Limitations and Future Research Directions

This study aimed at investigating behaviour intention to use social commerce technologies in the context of Saudi Arabia. First, conducting a descriptive analysis instead of inferential analysis will not allow the extension of the findings to the whole of the Saudi Arabian population. Consequently, this study will guide to assume the hypotheses in regards to the relations between factors, as well as using the structural equation modelling (SEM) to test the measurement model, structural model, and model fitness. Second, to consider investigating the behaviour intention rather than the actual use of social commerce will not give an overall view about using this technology in Saudi Arabia. Therefore, these issues should be taken into consideration in future research. This may assist organisations in Saudi Arabia to select the best strategy for encouraging consumers to use social commerce technologies, which will benefit their businesses. Finally, a comparative research should be conducted between developing and developed countries; also, the cultural context should be taken into consideration in the comparative research.

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