Iranian Journal of Management Studies (IJMS) *http://ijms.ut.ac.ir/*
Vol. 10, No.1, Winter 2017 *Print ISSN: 2008-7055*
pp. 63-90 *Online ISSN: 2345-3745*
DOI: 10.22059/ijms.2017.212223.672191

Factors Affecting Social Commerce and Exploring the Mediating Role of Perceived Risk
(Case Study: Social Media Users in Isfahan)

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(Received: July 25, 2016; Revised: December 27, 2016; Accepted: January 1, 2017)

Abstract

Owing to the ever-increasing prevalence of social media use, social commerce has become an important part of e-commerce. This study endeavors to explore the impact of social media quality and social support on the social commerce (SC) intention directly and through the variable of perceived risk. The sample included 214 social media users in Isfahan collected through simple random sampling method. A conceptual model was proposed based on the theoretical literature and empirical studies and was analyzed via Smart PLS software. According to the results, social media quality and support have positive effect on SC intention. However, social media quality has negative effect on user's perceived risk. Also, perceived risk has negative effect on SC intention and it has a partial mediating effect in the relationship between social media quality and social commerce intention. Results not only illustrate how SC develops, but also, they could facilitate active businesses; this way, they make preparations for composing a better SC strategy.

Keywords

Perceived risk, Social commerce intention, Social media quality, Social support.

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Introduction

Recently, Social Commerce (SC) has been considered as an emerging trend in e-commerce. This form of electronic commerce contains a wide range of business activities which are performed in such social media as Facebook, Tweeter, WhatsApp, and WeChat (Chen & Shen, 2015). Customers use SC to share their experiences and knowledge about the products and services in the internet via Web2 technologies (Pitta & Fowler, 2005). SC, as a subset of electronic commerce (Hajli et al., 2015), uses social media for doing commercial activities and transactions (Kim & Park, 2013; Ng, 2013). In other words, SC electronic commerce is combined with social media for facilitating buying and selling products and services (Kim & Park, 2013). Three major trends in SC can be introduced to add commercial assets to social media, add social media capabilities to electronic commerce websites as well as to reinforce using social media in offline firms for various marketing activities such as customer relationship management, brand communities, product promotion, and social shopping (Zhang et al., 2014). A unique characteristic of SC is using social media for WOM referrals. This feature distinguishes it from other forms of electronic commerce and can be the result of increasing trustworthy in SC (Kim & Park, 2013). Today, customers are creators of content (Phillips, 2011). Contemporary advances in technology have fostered the possibility for social media users to search for intended products and services in the internet and have access to the wealth of information and experiences of other customers before taking any decision to purchase (Maria & Finotto, 2008). So, the created digital content has fostered economic values (Pita & Fowler, 2005) and rich resources of reaching decision prior to making a purchase (Park et al., 2007).

Because customers attach more weight to the information that they receive from their friends in social media, this information can be effective for online shopping and plays a major role in SC development (Trusov et al., 2009). Active participation of the customers in social media seems to be a determinant factor in success

of businesses which intend to obtain economic value from SC (Wang & Zhang, 2012). Hence, understanding the effective factors on intention of SC users to share and receive business information is important. Identification of these factors assists to understand social media development and also it supports businesses to develop and enhance the strategy of their social media marketing.

In SC, customers are exposed to different technological and social assets, which can have some bearing on customer participation. Seeing as it is difficult to evaluate real behavior, evaluation of behavioral intention as a substitute for real behavior is prevalent (Venkatesh & Davis, 2000); as a matter of fact, it has been shown that intention is a valid predictor of real behavior. Well-known theories and models as the Reasoned Action Theory, the Technology Acceptance Model, and the Planned Behavior Theory have used intention as a substitute for real behavior. For that reason, Social Commerce Intention (SCI) is the focal point of this study as well.

Different studies on online shopping have examined the impact of website design and content in terms of system quality, information quality, and service quality in e-commerce success (e.g. Ahn et al., 2007; Chen et al., 2010; Liu & Arnett, 2000; Rodgers et al., 2005; Shih, 2004; Susser & Ariga, 2006; Yoon, 2002) as well as SC (Gatautis & Medziausiene, 2014; Liang et al., 2011). The effect of these factors has been explored in other studies under the title of SC assets on trust and intention to purchase (Hsiao et al., 2010; Kim & Park, 2013) and SCI as well (Liang et al., 2011). Social factors are ranked of great consequence in business success through social media and interactions among the users. On the other hand, the effect of social support on SCI has been explored in a few studies (Hajli, 2014; Hajli & Sims, 2015; Liang et al., 2011; Vrechopoulos et al., 2004; Zhang et al., 2014). Some of these studies (Chen & Shen, 2015; Hajli, 2014; Liang et al., 2011; Weisberg et al., 2011) have considered the effect of social support on relationship quality involving satisfaction, commitment and trust.

Though favorable relations with virtual customers is an important factor for success in online transactions (Bart et al., 2005; Corbitt et

al., 2003; Salo & Karjaluoto, 2007), creating positive relationship with virtual customers depending on a number of perceived risks and expenses in online shopping, that is, customer perception of risks in SC are very important. It has been shown in previous studies that risk is perceived higher in an online setting than a traditional common environment by the customers (Mukherjee & Nath, 2003; Wang et al., 2003). Perceived risk can play key role in online shopping behavior (Chang Lee et al., 2013) because it is related to the other perceptions of the virtual setting user such as attitude (Chang Lee et al., 2013), and loyalty (Flavián et al., 2006). Negative effect of perceived risk on online shopping behavior has been settled in some studies (Liao & Cheung, 2001; McKnight et al., 2002). This way, perceived risk can be a determinant factor in SC development.

One of the major limitations of previous studies is that customer's perceived risk has not been considered in the models associated with SC. Based on the studies about online shopping, it is expected that customer's perceived risk is an important factor in shedding light on customer participation in SC. Customer's perceived risk especially in societies wherein SC is a new process has a higher importance; that being so, considering the role of users' perceived risk is important in SC. The distinctive feature of this study from previous surveys appears to be the role of perceived risk in the conceptual model.

Regarding the aforementioned parts, this study endeavors to address the following research questions:

1. To what extent can such factors as social media quality and social support affect users'
   a) intention to conduct SC?
   b) perceived risk to conduct SC?
2. What effect(s), if any, does the user's perceived risk have on one's intention for doing SC?
3. With the presence of perceived risk, how does the quality of social media and social support affect the intention of users for doing SC?

Literature Review and the Conceptual Model of SC

SC is a form of commerce that is done via social media and provides the possibility of participation in marketing or selling of products and services in online communities and markets (Hajli & Sims, 2015; Huang & Benyoucef, 2013). Appearance of SC has converted the passive behavior of users into active content creators in virtual setting (Hajli et al., 2015). SC has facilitated customers' interactions for their active participation in the exchange of information about the products and services via technologies such as social media (Liang & Turban, 2011). Studies indicate that customers intend to share their shopping experiences with their counterparts. The shared experiences for customers especially those who receive the information from their counterparts seem valuable. Further, this information is effective in their purchase decision. Social interactions and relations in online setting are basically formed based on the common interests (Hajli, 2014) and generate rich information in online transactional setting (Yadav & Varadarajan, 2005). This way, it is possible to have better perception of customers. Online communities such as social network websites provide the shared personal experiences and information in a business environment (Lu & Hsiao, 2010). Researchers have identified the effective factors on SC in order to explore it. In these studies, the relationship between factors related to SC such as SC constructs, trust, commitment, utilitarian, and hedonic values and customers' intention to purchase (Bai et al., 2015; Chen & Shen, 2015; Hajli, 2015; Kim & Park, 2013; Ng, 2013) has been explored. Similarly, the useful factors on SCI such as social support, social presence, flow, subjective norms, perceived behavioral control, attitude, relationship quality, website quality, and perceived value have been studied in other studies (Hajli, 2014; Hajli et al., 2015; Hajli & Sims, 2015; Liang & Turban, 2011; Zhang et al., 2014). The mediating role of trust in SC models has been taken into account in some of these studies (Hajli, 2013; Hajli, 2014; Hajli, 2015; Kim & Park, 2013; Liang et al., 2011), while customer's perceived risk is considered as a major factor in SC as well. In this study, the mediating

role of perceived risk in the relationship between effective factors on SC and SCI is examined.

Social Support

Social support denotes the perceived support, attention, and assistance of other people and this support can be physical or psychological. The users in social media feel they have received support by receiving the shared information and thus, they will have intention to receive or share valuable shopping information with others (Bai et al., 2015). Friendship and trust among the users is improved by continuous supportive information sharing and as a result, their intention towards carrying business activities in social media setting is boosted. The role of social support in determining customer behavior has been confirmed in studies about SC (Liang et al., 2011). Today, personal social networks can be grown in virtual settings given the development of these networks and therefore, social networks have become a major source for social support (Lin et al., 2012). Social support is a multidimensional construct with different components. This construct constitutes emotional, instrumental, appraisal, and information dimensions that users usually receive emotional and information supports in virtual social groups due to the virtual nature of social media (Coulson, 2005; Huang et al., 2010). The effect of social support on intention to purchase (Bai et al., 2015) and SCI (Hajli, 2014; Hajli, 2015; Hajli & Sims, 2015) as well as trust (Chen & Shen, 2015; Hajli, 2014; Liang et al., 2011) has been explored in previous studies. This study aims to examine the effect of social support on customer's perceived risk in SC along with the effect of social support on SCI. To the researchers' knowledge, the effect of social support on customer's perceived risk has not been taken into account in previous studies.

Social Media Quality

The quality of communication channel between the supplier and customer is very important in online business transactions. In this regard, the importance of system quality, information quality, and service quality has been explored in many studies about e-commerce

(Ahn et al., 2007; Delone & McLean, 2003; Hasan & Abuelrub, 2011). Beyond doubt, social media quality in SC through which business transactions are done is very important. For instance, system quality and information quality are proposed as the important design assets in SC that can have a considerable effect on customers' perceptions and participation (Huang & Benyoucef, 2013). Equally, the factors related to designing social network websites are considerably effective on social sharing behavior and users' social shopping (Liang et al., 2011). Transactional safety and information quality have been pointed as the important assets in SC (Huang & Benyoucef, 2013). The very important role of transactional safety and information quality in e-commerce success (Ahn et al., 2007; Delone & McLean, 2003; Hasan & Abuelrub, 2011; Liu & Arnett, 2000; Susser & Ariga, 2006), and SC (Kim & Park, 2013; Liang et al., 2011) has been emphasized in various studies. Kim and Park (2013) investigated the effect of SC characteristics including reputation, size, information quality, transactional safety, communications, economic feasibility, and word of mouth referrals on trust. According to their results, information quality and transactional safety have had a positive significant effect on trust in SC. In Liang's study (2011), the effect of website quality (system quality and service quality) on relationship quality and SCI has been investigated. The results of Liang's study confirmed the effect of website quality on relationship quality (trust, satisfaction, and commitment) and SCI. Although the effect of social media quality on formation of a positive relationship between the supplier and customer is very important in SC, the effect of this factor on customer's perceived risk should be considered. This has been focused in a few studies. For instance, Chang and Chen (2008) explored the effect of website quality and website brand on trust as well as perceived risk in e-commerce. Chang and Chen concluded that the effect of website quality that are technical adequacy, content quality, and special content on customer's trust and perceived risk is significant.

Along these lines, two important factors of social media quality in SC, namely transactional safety and information quality were

considered in this study. The effect of social media quality on perceived risk along with SCI was investigated.

Perceived Risk

Perceived risk in virtual environments can be defined as loss expectation of the virtual customer in an electronic transaction (Chang Lee et al., 2013). In shopping from an online setting, there is a higher risk and lower trust for the customer unlike the physical environment because there are more problems with regard to appraisal of a product or service. There is no visual and tangible sign about the quality of a product as well as no face-to-face relation with sales agents in online shopping. Moreover, security and privacy in shopping from a virtual environment are very important and effective on customer's purchasing decision (Laroche et al., 2005; San Martín & Camarero, 2009). Perceived risk can be regarded as a multidimensional construct. These aspects include functional, financial, physical, social, time, and psychological risks which create total risk of customer in shopping from a virtual environment (Featherman & Pavlou, 2003). Perceived risk has critical role in explaining consumer behavior and consumer purchase decision making. The results of previous studies showed that the perceived risk reduced consumer intention to buy over the internet (San Martín & Camarero, 2009). The negative effect of perceived risk on virtual customer's behavior has been explored in previous studies in e-commerce (Kimery & McCord, 2002; Vijayasarathy & Jones, 2000). In SC, social media have provided possibility of interactions among individuals, thus, consumer behavior may be influenced by cultures, beliefs and experiences of others. As a result, perceived risk in SC could have been more challenging for consumers in return of e-commerce (Featherman & Hajli, 2015). Exploring the models related to SC shows that the role of trust and making relation with customers has been investigated in these models to analyze social media users' behavior (Hajli, 2014; Kim & Park, 2013; Liang et al., 2011). On the other hand, the perceived risk in social commerce has not been the attention in the studies. Accordingly, this study explores the mediating role of perceived risk in the proposed model which deals with SCI.

The Research Model

Figure 1 displays the research model; that being so, the hypotheses are formulated in this section.

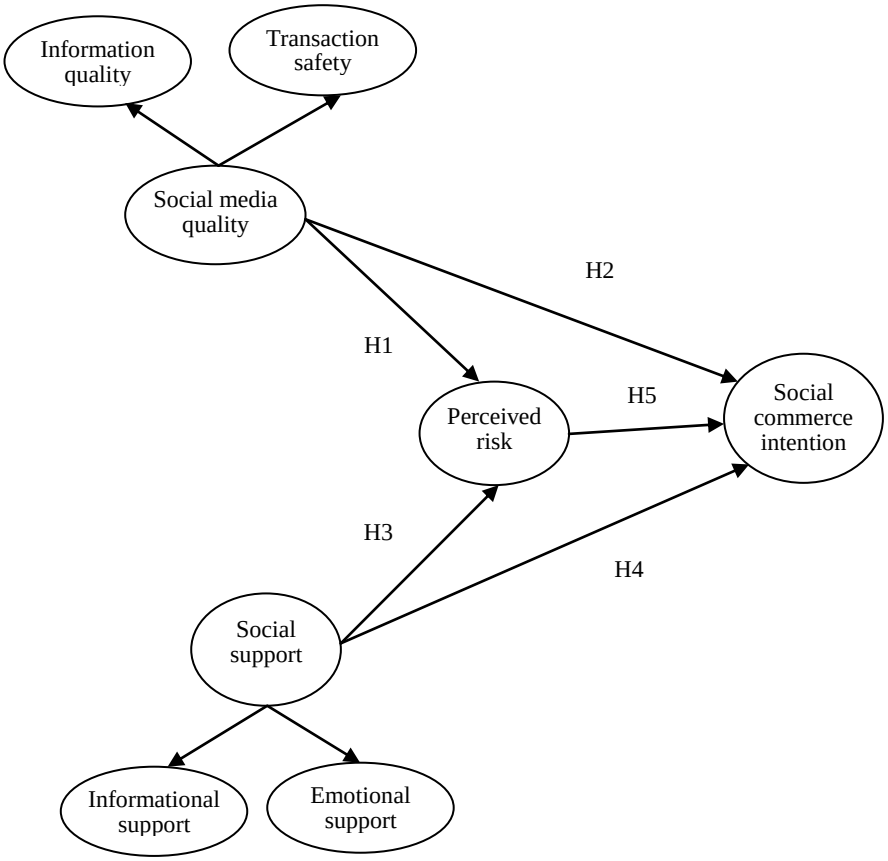

Fig. 1. The research model

The Effect of Social Media Quality

If customers trust authenticity of a website, they may have intention to disclose their own information, which, in turn, can reduce customer's anxiety about issues of security and privacy (Chen & Barnes, 2007). Accordingly, customer's perceived risk will be reduced. Many studies have stressed the effect of system quality such as the provided information by a website on trust formation in online shopping (Kim & Park, 2013; Liang et al., 2011; Montoya-Weiss et al., 2003). If customers have confidence in social media quality, they will have less

doubt in their purchases and thus will perceive a lower risk. Consequently, the following hypothesis is proposed:

H1: Social media quality has a negative effect on perceived risk.

Suitable quality of social media allows users to solve their problems in purchasing activities and satisfy their expectations. So, customers have intention towards more participation in SC. Social media quality can have a positive effect on customers' perception and influence their social shopping (Liang et al., 2011).

A high-quality medium persuades users to view it as a suitable tool for social interaction as well as a tool for commercial interactions; so, the users are able to share their experiences. This way, social media quality can exert a positive significant effect on SCI. For that reason, it is proposed that:

H2: Social media quality has a positive effect on user's SCI.

The Effect of Social Support

Given that social media users in virtual environments usually receive intangible support from other users; social support in this study has been considered with its two aspects, namely emotional support and information support. According to Schaefer, Coyne and Lazarus (1981) those who have health stress need emotional and information supports (intangible supports) as well as tangible supports. So, social support in social media may reduce customer's perceived risk. Previous studies on social psychology have revealed that social support can improve relationship quality and reduce stress (Cobb, 1976; Coulson, 2005; Taylor et al., 2004).

Social support in the social media gives rise to the trust of users to each other as well as their tendency for exchanging commercial data (Liang et al., 2011). Accordingly, sensing and information support among the users of social media may help to alleviate the perceived risk; that being so, the following hypothesis can be put forward:

H3: Social support has a negative effect on perceived risk.

Through prevalence of social media, social support is widespread in virtual setting and can be effective on shaping virtual customers' behavior as an operative tool (Tsai et al., 2012).

The mutual interaction of social support among the users in the social media motivates them to share their information, knowledge, and experience about buying with each other. Hence, individuals' interactions through social media can exert favorable effect on their SCI (Naylor et al., 2012). Thus, it is proposed that:

H4: Social support has a positive effect on user's SCI.

The Effect of Perceived Risk

Risk plays an important role in virtual consumer's behavior. This variable has a valuable role in explaining information, seeking behavior, and purchase decision-making (Barnes et al., 2007; Corbitt et al., 2003; Vijayasarathy & Jones, 2000). Empirical studies have indicated that perceived risk decreases the consumer's intention to purchase a product through the internet (Barnes et al., 2007). The effect of perceived risk on intention towards e-services acceptance (Featherman & Pavlou, 2003) as well as loyalty and attitude towards the use of social networks (Chang Lee et al., 2013) has been settled in previous studies. When users in the social media perceive less risk in the virtual situation, they show more tendency for exchanging their experiences and information with each other. Therefore, perceived risk can reduce users' SCI. This way, the fifth hypothesis is put forward as follows:

H5: Perceived risk has a negative effect on user's SCI.

Methodology

Data Collection

This study was conducted in March 2016 in Iran and social media users in Isfahan were the population. In order to increase the response rate, 240 questionnaires were distributed both through the internet and in written formats[1]. Among 230 returned questionnaires, 214 questionnaires were accepted and the remaining was excluded because of incomplete responses.

1. The sample size was calculated equal to 212 using SPSS Sample Power software with regard to 3 independent variable existed in the model: the confidence level 95%, statistical power 80% and the effect size 5%.

Measurement Tools

The employed questionnaire contained two sections. The first section was about demographic information and the second section was about the appraisal of the research constructs. The conceptual model included four constructs; that is, social media quality and social support as independent variables, perceived risk as the mediating variable, and SCI as the dependent variable. Table 1 shows the resources which were used to develop the questionnaire. The questions are presented in Appendix. They were developed based on the five-point Likert scales (1, highly disagree to 5, highly agree).

Table 1. Sources of Measurement Items

Constructs	Dimensions	Number of item	Source
Social media quality	Transaction safety	3	Ahn et al., 2007; Kim & Park, 2013
	Information quality	3	
Social support	Informational support	4	Bai et al., 2015; Zhang et al., 2014
	Emotional Support	3	
Perceived risk		8	Chang Lee et al., 2013; Chang & Wen Chen, 2008
Social commerce intention		4	Hajli, 2014; Liang et al., 2011; Zhang et al., 2014

Measurement Models

Reliability

Cronbach's alpha and composite reliability scores were used to compute internal reliability of constructs. Based on the results (Table 2) the reliability was more than 0.7.

Validity

Validity of the questionnaire was confirmed at construct and indicator levels. In effect, convergent validity and discriminant validity were analyzed. The AVE criterion indicates convergent validity. This criterion shows correlation among the items related to each construct. In order to have convergent validity, AVE criterion should at least be equal to 0.5 (Wixom & Watson, 2001). According to the results in Table 2, convergent validity is realized for all constructs. It is of note that in two-level components, AVE values of the first level components must be greater than those of the second level.

Discriminant validity was checked by means of Fornell-Larcker criterion. According to the results (Table 3), all constructs have discriminant validity. To examine convergent validity and discriminant validity at the indicator level, factor loadings were explored which more than 0.7 and this unfolded convergent validity of constructs' indicators. Cross loadings were examined to explore discriminant validity at the indicator level. In order to have discriminant validity, factor loadings related to items of each construct must be greater than the ones for other constructs. The results show that the indicators of all constructs have discriminant validity (Table 4).

Table 2. Indicator Loadings, AVE, CR and Cronbach's Alpha of Constructs

Constructs	Indicators	Loadings	CR	AVE	Cronbach's α
First-order construct					
Transaction safety	TS1: TS2: TS3:	0.909 0.901 0.898	0.950	0.864	0.921
Information quality	IQ1: IQ2: IQ3:	0.916 0.924 0.932	0.939	0.853	0.914
Informational support	IS1: IS2: IS3: IS4:	0.895 0.917 0.900 0.854	0.940	0.838	0.903
Emotional support	ES1: ES2: ES3:	0.872 0.918 0.917	0.929	0.815	0.866
Perceived risk	PR1: PR2: PR3: PR4: PR5: PR6: PR7: PR8	0.642 0.782 0.809 0.773 0.733 0.707 0.677 0.671	0.899	0.528	0.871
Social commerce intention	SC1: SC2: SC3: SC4:	0.806 0.867 0.833 0.823	0.900	0.693	0.853
Second-order construct					
Social media quality	Transaction safety Information quality	0.805 0.860	0.923	0.667	0.900
Social support	Informational support Emotional support	0.833 0.825	0.922	0.628	0.901

Table 3. Discriminant validity test

	ES	IQ	IS	TS	SC	SS	PR	SMQ
ES	0.903							
IQ	0.343	0.924						
IS	0.556	0.393	0.892					
TS	0.432	0.578	0.371	0.903				
SC	0.392	0.437	0.447	0.451	0.833			
SS	0.878	0.423	0.879	0.459	0.486	0.802		
PR	-0.209	-0.384	-0.199	-0.448	-0.425	-0.235	0.726	
SMQ	0.433	0.882	0.428	0.879	0.498	0.493	-0.459	0.817

Notes: Off-diagonal elements show the inter-correlations between the constructs, while diagonal elements in bold and italic are the square root of the AVE for each construct; TS = Transaction Safety, InQ = Information Quality, SS = Social Support, PR = Perceived Risk, SMQ = Social Media Quality, SCI = Social Commerce Intention

Table 4. Indicator loadings and cross-loadings

Indicators	TS	IQ	IS	ES	PR	SCI
TS1	0.909	0.512	0.362	0.363	-0.397	0.458
TS2	0.901	0.561	0.303	0.413	-0.440	0.403
TS3	0.898	0.496	0.338	0.396	-0.376	0.361
IQ1	0.554	0.916	0.386	0.284	-.0339	0.465
IQ2	0.555	0.924	0.357	0.362	-0.395	0.432
IQ3	0.493	0.932	0.345	0.304	-0.330	0.311
IS1	0.424	0.396	0.895	0.563	-0.223	0.471
IS2	0.327	0.404	0.917	0.528	-0.219	0.448
IS3	0.281	0.300	0.900	0.441	-0.116	0.350
IS4	0.270	0.286	0.854	0.437	-0.141	0.304
ES1	0.332	0.307	0.556	0.872	-0.198	0.341
ES2	0.412	0.288	0.508	0.918	-0.183	0.362
ES3	0.430	0.336	0.437	0.917	-0.185	0.358
PR1	-0.285	-0.310	-0.174	-0.028	0.642	-0.284
PR2	-0.307	-0.307	-0.148	-0.106	0.782	-0.282
PR3	-0.360	-0.300	-0.132	-0.119	0.809	-0.332
PR4	-0.335	-0.319	-0.175	-0.106	0.773	-0.310
PR5	-0.284	-0.180	-0.130	-0.192	0.733	-0.341
PR6	-0.291	-0.200	-0.069	-0.220	0.707	-0.185
PR7	-0.342	-0.242	-0.240	-0.224	0.677	-0.370
PR8	-0.366	-0.334	-0.095	-0.226	0.671	-0.318
SCI1	0.335	0.290	0.361	0.322	-0.298	0.806
SCI2	0.385	0.381	0.385	0.292	-0.349	0.867
SCI3	0.369	0.363	0.362	0.336	-0.310	0.833
SCI4	0.405	0.408	0.378	0.352	-0.439	0.823

Data Analysis Approach

Structural equation modeling via partial least squares approach

The use of Structural Equation Modeling (SEM) in social science studies is increasing due to its high capability in appraisal of theoretical models (Ringle et al., 2012). Also, SEM is more superior than other statistical methods such as multiple regressions for exploring construct validity. Hence, SEM was employed to explore the proposed model.

Partial least squares approach is one of the prevalent approaches in studies on information systems (Hajli, 2014). This approach has some advantages than other methods, for example, it is appropriate for the analysis of samples with small and moderate sizes. Similarly, the use of this approach to evaluate latent variables does not require the condition of normal data and is suitable for both exploratory and confirmatory studies. Because SC is a new phenomenon in e-commerce and theoretical information about it is not adequate, this study is mainly exploratory and PLS is an appropriate approach.

Results

Results of demographic analysis

The acceptable responses included 29.9% male respondents and 70.1% female respondents; 43% were between 20-30 years old and in terms of education level, 33.6% had B.A. and 51.4% were undergraduate students. Moreover, 50.5% were employed and 30.8% had more than five times shopping experiences from social media. Also, 43.5% purchased their consumer goods through the social media. The results are displayed in Table 5.

Table 5. Demographic Profile of Respondents (n=214)

Variable	Number	Percent
Gender		
Male	64	29.9
Female	150	70.1
Age		
Less than 20	59	27.6
Between 20-30	92	43
Between 30-40	53	24.8
More than 40	10	4.6

Continue Table 5. Demographic Profile of Respondents (n=214)

Variable	Number	Percent
Education level		
Diploma	3	1.4
Undergraduate student	110	51.4
B.A.	72	33.6
M.A.	18	8.4
PhD	11	5.1
Job		
Employed	108	50.5
Unemployed	106	49.5
Shopping experience		
One time	48	22.4
Between 2-5 times	45	21
More than 5 times	66	30.8
Type of the purchased good		
Service	66	30.8
Consumer good	93	43.5

Results of the variables status

To investigate the status of variables, the estimates of means and one-sample t-test were used. The results are displayed in Table 6. Based on the results, the factors transaction safety, emotional support and perceived risk are at average level and the other variables including information quality, informational support and social commerce intention are higher than average. Regarding the values of the means of these variables, it is suggested that despite the factors, the information quality (3.16), the informational support (3.41), and the social commerce intention (3.17) are significantly higher than the average (of 3) but it cannot be claimed that the condition of these variables are in quite favorable level (in the range of 4 to 5).

Table 6. Results of One-Sample T-Test Analysis

Variable	Mean	Std. deviation	Test value = 3				
			T	Sig	Mean difference	Confidence interval 95% for mean difference	
						Lower	Upper
TS	2.997	.974	-.035	.972	-.003	-.133	.128
InQ	3.168	.933	2.635	.009	.162	.042	.294
IS	3.413	.893	6.774	.000	.415	.293	.533
ES	3.004	.943	.072	.942	.006	-.122	.132
PR	3.065	.820	1.167	.245	.064	-.045	.175
SCI	3.179	.895	2.938	.004	.179	.059	.300

Notes: TS = Transaction Safety, InQ = Information Quality, IS = Informational Support, ES = Emotional Support, PR = Perceived Risk, SCI = Social Commerce Intention

Structural Model

The research model was measured by means of SEM. The estimated results are shown in Figure 2 and Table 7. According to the results, social media quality and social support have a positive significant effect on SCI. Path coefficients for the effect of social media quality and social support on perceived risk show that social media quality has a negative significant effect on perceived risk but the effect of social support on perceived risk is not significant. Therefore, hypotheses H1, H2, H4 and H5 are confirmed at the significance level 0.001 but hypothesis H3 is not confirmed. Consequently, social support has a stronger effect on SCI than social media quality.

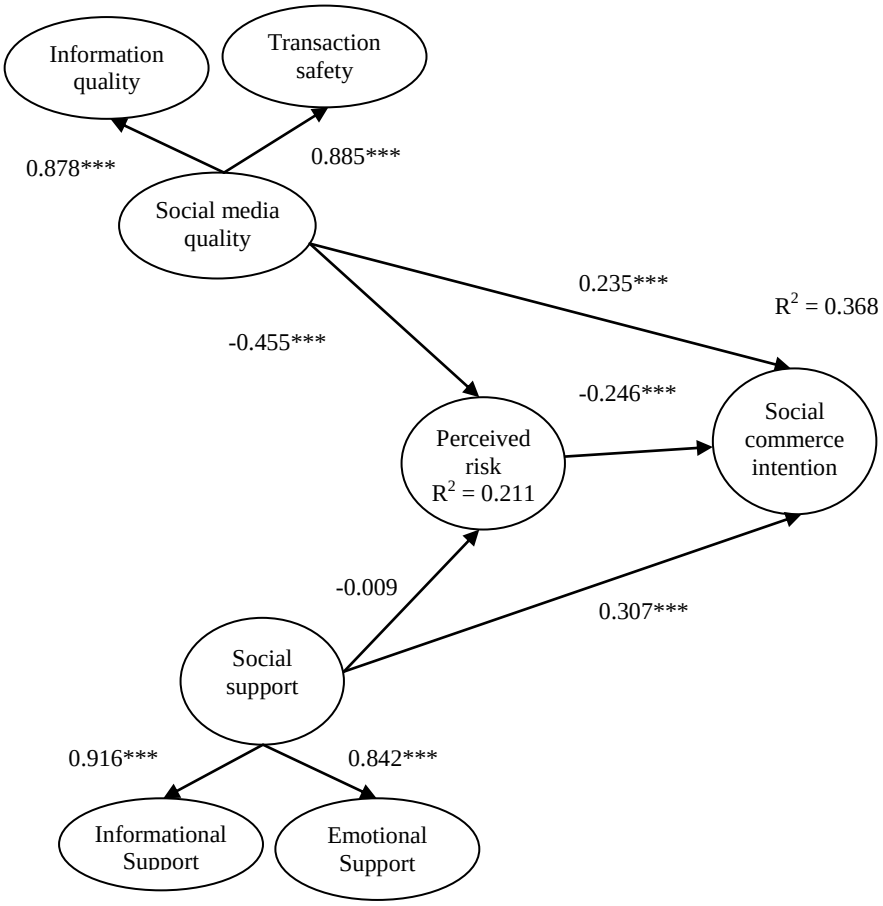

Fig. 2. Results of the PLS analysis
***** P≤ 0.001**

Table 7. Results of hypotheses testing

Hypotheses	Structural path	Path coefficients	T statistics	Supported
H1	SMQ - > PR	-0.455***	6.481	Yes
H2	SMQ - > SCI	0.231***	3.263	Yes
H3	SS - > PR	-0.009***	0.114	No
H4	SS - > SCI	0.307***	4.607	Yes
H5	PR - > SCI	-0.246***	3.897	Yes

Note: *** $p \leq 0.001$; $R^2 = 0.211$ (PR); $R^2 = 0.368$ (SCI); TS = Transaction Safety, InQ = Information Quality, SS = Social Support, PR = Perceived Risk, SMQ = Social Media Quality, SCI = Social Commerce Intention

Exploring the Mediating Effect of Perceived Risk

The mediating role of perceived risk between social media quality and social support was explored with SCI. According to the results in Table 8, given that the total effect, direct effect, and indirect effect of social media quality on SCI are significant, it can be inferred that the perceived risk plays a partial mediating role in the relationship between social media quality and SCI. With regard to social support, because direct effect of this factor on SCI is significant and its indirect effect is not significant, consequently, the effect of social support on SCI is explored directly and without the perceived risk variable.

Table 8. Testing for mediating effects

IV	DV	Effect type			
		Total	Direct	Indirect	Mediating effect
SMQ	SCI	0.347***	0.235***	0.112***	Partial
SS		0.310***	0.307***	0.002	No Mediating effect

Note: *** P≤ 0.001; SS = Social Support; SMQ = Social Media Quality, SCI = Social Commerce Intention

Discussion and Conclusions

Ever-increasing prevalence of social media has provided new opportunities for businesses as well as research studies. SC is one of these opportunities. The major purpose of this study was to explore the role of social media quality, social support and perceived risk of users in virtual environment on their intention towards sharing and receiving business information through social media. The results of

this study showed that (1) social media quality can decrease users' perceived risk in SC and also it can have a positive effect on users' intention to exchange business information, (2) social supports including emotional and information supports do not have a significant effect on decreased perceived risk of users but it has a positive effect on users' SCI, (3) users' perceived risk has a negative effect on their SCI and (4) users' perceived risk plays a partial mediating role in the relationship between social media quality and SCI. This implies that social media quality can increase SCI directly and via decreased perceived risk of users.

These results contain valuable and applicable information for researchers and active businesses in the field of SC. First, the results indicated that social media quality can pave the way for SC. This result is consistent with the results of previous studies in the field of SC (Kim & Park, 2013; Liang et al., 2011) and e-commerce (Ahn et al., 2007; Delone & McLean, 2003; Hasan & Abuelrub, 2011; Liu & Arnett, 2000; Susser & Ariga, 2006). High quality of social media facilitates virtual interactions. Generally, customers perceive a higher risk in social media. This is more critical especially in communities where social media use is in its primary infancy. The virtual environment users experience lower concern in high quality social media and thus they experience a lower risk in doing business activities through social media. As a result, they have higher intention to exchange business information in social media. Along these lines, the enhancement of social media quality via the presented information to users and ensuring transactional safety in business transactions are very important for success in SC.

Another result showed that social factors that are unique characteristics of social media can play an important role in facilitation of SC. Social support is an important social factor that was considered in this study. The reason of social support importance in SC is that users can have a sense of intimacy with each other via supportive interactions among them and thus they have more intention to exchange business information. Accordingly, active businesses in SC should try to provide this supportive condition in their intended

social media for their customers. According to the results, social support cannot reduce customer's perceived risk. It seems this result is such because SC in Iran is a novel process. Despite the fact that the number of social media users in Iran has increased considerably in recent years, but users' perceived risk to perform business activities in social media is extremely high because this is a new phenomenon. For that reason, the current supportive climate that is created via relations among users cannot decrease users' perception of the current risks in business activities. This is in contrast with the results of previous studies that have been carried out in more advanced communities in terms of SC. In those studies, the positive effect of social support on SCI (Chen & Shen, 2015; Hajli, 2014; Liang et al., 2011; Zhang et al., 2014) and also intention to purchase (Bai et al., 2015) have been confirmed.

Another result is that the user's perceived risk can decrease one's intention to exchange business information in virtual environment. Thus, whatever social media users perceive a higher risk in doing online business transactions; they will refrain from receiving and sharing of business information with other users to the same extent. Customers' perceived risk has more importance in communities where lower business transactions are done through social media. Therefore, considering some mechanisms to decrease users' risk for SC success especially in communities where this process is still in its primary stages is highly important. The negative effect of perceived risk on customer's perceptions and online shopping behavior in previous studies (Chang Lee et al., 2013; Liao & Cheung, 2001; McKnight et al., 2002) has been approved.

According to the results of the status of the investigated variables, since the transactional safety is at average level, therefore, it is necessary to strengthen this variable through mechanisms from active businesses in social commerce. In other words, customers in buying activities via social media should be assured of considering security issues such as the impossibility of misuse of information and providing secure payment transactions via the internet by providers. In addition, since the perceived risk has a significant negative impact on

the social commerce intention and its condition is at average level, considering ways to reduce the risks of purchasing through social media, including privacy risk, psychological risk, product risk, and financial risk is very important. Considering this fact that the variable of information quality is not also at a very favorable level; therefore, it is essential for suppliers to try to introduce information as accurate and authoritative as possible in social media to their customers.

Generally speaking, the results in this study emphasize that increased quality of social media in terms of transactional safety and information quality as well as providing a supportive culture in virtual groups through which business transactions are performed can facilitate SC. Paying attention to the important quality factors of social media can decrease the risks with which customers are faced in doing business transactions. Besides, taking actions to decrease customers perceived risk can facilitate SC.

The study has some limitations like other studies. The most important limitation is that this study was conducted in a country where the users of virtual environment are encountered with problems in using the social media because of the restrictions on it and therefore, SC is still in early days of advancement. This issue can narrow the generalization of the results. Using field study method is another limitation, because some users' responses may not be consistent with their behavior in real world. Examining some components of social support and social media quality constructs in the research model is another limitation of this study. In addition, despite the fact that well-known theories such as the Theory of Planned Behavior (TPB) considered intention as a predictive variable for real behavior, however, due to that social commerce is a trend emerging in Iran; consumers may not show stable intentions. on the other hand, less stable intentions result in weaker relation between intentions and real behavior (Sheeran et al., 2001). Thus, investigating social commerce intention could be mentioned as a limitation of this research.

Despite the above-mentioned limitations, this study can create a better perception of users' commercial behavior in social media by

emphasizing the importance of social media and social support in SCI as well as highlighting the importance of perceived risk in SC. The results of this study are very important especially for communities where SC is a novel process. In subsequent studies, it seems necessary to deal with other social factors such as social presence and highly important technological factors in SC. Paying attention to trust and perceived risk simultaneously in the research model could be useful to analyze the effect of quality of reciprocal perceptions of social media users in SCI.

Appendix. Constructs and items

Constructs	Items
Transaction safety	TS1: The social media from which I do shopping performs the necessary security actions to support online shopping.
	TS2: The social media from which I do shopping usually guarantee that the transaction information is protected against misuse.
	TS3: I am sure about the security in electronic payment system of social media.
Information quality	InQ1: The social media from which I do shopping offer accurate information about any product that I want to purchase.
	InQ2: The social media from which I do shopping offer reliable information.
	InQ3: The social media from which I do shopping give helpful information to their users.
Informational support	IS1: In the social media from which I do shopping, some people offer helpful suggestions when I need help.
	IS2: In the social media from which I do shopping, some people offer helpful information to solve my problems.
	IS3: In the social media from which I do shopping, some people help discover the reason of my problems and present some suggestions.
	IS4: In the social media from which I do shopping, some people share useful information about the products which can be effective in better shopping.
Emotional support	ES1: In the social media from which I do shopping, people listen to my personal feelings when there is a problem.
	ES2: In the social media from which I do shopping, some people calm down and motivate me when there is a problem.
	ES3: In the social media from which I do shopping, some people express their interest and concern about my peacefulness when there is a problem.

Continue Appendix. Constructs and items

Constructs	Items
Perceived risk	PR1: In case of shopping from social media, my personal information is most probably misused without permission. PR2: I think shopping from social media is risky. PR3: Shopping from social media creates nervousness for me. PR4: In case of shopping from social media, I will have an unpleasant feeling. PR5: In case of shopping from social media, I worry that I should wait for a long time to deliver my product. PR6: In case of shopping from social media, I worry that the quality of the product/service may not satisfy my expectations. PR7: In case of shopping from social media, most probably I cannot receive the purchased product. PR8: In case of shopping from social media, most probably I will face with financial loss.
Social commerce intention	SCI1: I intend to share my shopping experiences with my friends in social media. SCI2: I intend to suggest a product which is valuable to be purchased to my friends in social media. SCI3: Before shopping, I inquire about my friends' suggestions in social media. SCI4: I intend to purchase the products that my friends suggest in social media.

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