The effect of social connectedness on consumer adoption of social commerce in apparel shopping

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Abstract

The purpose of this study is to examine the effect of social connectedness on social media users' attitudes and intentions towards adopting social commerce in the technology acceptance model (TAM). Data collected from young adult social media users ($n = 446$) in the US support the proposed model. A structural equation model shows that social connectedness positively influences social media users' perceptions of ease of use, usefulness, and enjoyment, which in turn, influence their attitudes and intentions towards adopting social commerce in apparel shopping. The impact of social connectedness is stronger on perceived ease of use than other TAM variables. Perceived enjoyment has the strongest impact on attitudes, and attitudes strongly influence consumer intentions for adopting social commerce for apparel purchases. Results of this study reveal that social connectedness enhances social media users' perceptions of social commerce and positively leads to the adoption of social commerce in apparel shopping. Findings indicate that social connectedness has an indirect effect on attitudes towards social commerce through utilitarian (i.e., ease of use and usefulness) and hedonic (i.e., enjoyment) perceptions of social commerce. These findings highlight the importance of social connectedness through utilitarian and hedonic perceptions in enhancing consumers' adoption of social commerce for purchasing apparel products.

Keywords: Social connectedness, Attitudes, Intentions, Social commerce

Introduction

Over 3 billion people in the world use social media (Kemp 2018), and a recent consumer survey from eMarketer in 2017 forecasted that two-thirds of the US population will soon use two or more social networking sites in social media. Social networking sites are defined as online applications that give Internet users the ability to create a profile, share the profile with a list of other Internet users, and view information uploaded by those connections (Boyd and Ellison 2007). Social networking sites facilitate interactive communication among social media users through social sharing (Liang et al. 2011). For instance, in a brand's social media fan page, consumers interact not only with the brand but also with the brand's other customers. Consumers share their shopping experiences and recommend products and services based on their experiences. The information search and sharing processes in social media influence social media users' behaviors (eMarketer 2017; Mangold and Faulds 2009).

As increasing numbers of consumers engage daily with social networking sites such as Facebook and Instagram, social media has become an important marketing strategy for business (Kim and Ko 2012; Liang and Turban 2011; Yadav et al. 2013). For this reason, the majority of US marketers have increased their budgets for marketing strategies using social media (eMarketer 2016). The growing popularity of social media has opened new avenues for the digital marketing industry. Social commerce, a subset of e-commerce, refers to commercial activities that are influenced by social media users' interactions in computer-mediated social environment (Liang et al. 2011; Yadav et al. 2013). Social commerce has rapidly grown to a $30 billion business in the US (Anderson et al. 2011), and retailers are seeking effective ways to enhance their sales and promotions through social commerce (Zhou et al. 2013). For instance, many fashion brands such as Coach and J. Crew feature a "Shop Now" banner on Facebook that directs consumers to the brand's website for efficient transactions. Online social interaction activities (i.e., sharing and liking posts) develop social connectedness among social media users (Grieve et al. 2013). As the social media users interact with each other, they tend to perceive themselves as similar in attitudes and behaviors, which in turn, enhances their sense of belonging to the brand's community (Xiang et al. 2016).

Social connectedness refers to the senses of belonging and affiliation that occur within close interpersonal relationships (Lee et al. 2001). Studies have found that social support and feelings of belonging help users perceive warmth and build close relationships with other users in online communities (Obst and Stafurik 2010; Shaw and Gant 2002). Social connectedness among social media users is what differentiates e-commerce users from social commerce users (Hajli 2015). In social commerce, individual consumers institute their social connectedness with brands and other consumers and use the connectedness for sharing and supporting their pre-purchase, purchase, and post-purchase experiences (Hajli et al. 2017; Huang and Benyoucef 2013; Stephen and Toubia 2010). Despite the important role of social connectedness in social commerce, there is insufficient empirical research examining its impact on social commerce acceptance and purchase behaviors in social commerce. Recent studies have focused on understanding the content of social media pages (Ashley and Tuten 2015; Kumar et al. 2016), social media usage (Zhao et al. 2016), consumer motivation to connect with apparel retailers' Facebook pages (Anderson et al. 2014), and the role of trust in social commerce (Hajli et al. 2017; Kang and Johnson 2013; Kim and Park 2013; Yahia et al. 2018). However, these studies neglected the social relationship dimension which has been recognized as a crucial factor in social commerce (Rauniar et al. 2014). To fill the addressed gap, the present study intertwines social connectedness with the technology acceptance model (TAM; Davis et al. 1992) in the context of social commerce. This study investigates the role that social connectedness plays in the process of predicting consumer intentions towards adopting social commerce in apparel shopping. Therefore, the purpose of this study is to examine (1) how social media users' social connectedness influences their utilitarian (i.e., perceived ease of use and usefulness) and hedonic (i.e., enjoyment) perceptions, (2) how these utilitarian and hedonic perceptions influence social media users' attitudes towards social commerce, and (3) how their attitudes influence on intentions of adopting social commerce in apparel shopping.

Literature review

Theoretical framework: extended technology acceptance model

The TAM is used as a theoretical framework in this study. TAM (Davis 1989; Davis et al. 1992) has been widely applied as a theoretical model to explain consumers' behavioral intentions to use a new technology (King and He 2006). TAM was derived from the theory of reasoned action (Ajzen and Fishbein 1980; Fishbein and Ajzen 1975) and the theory of planned behavior (Ajzen 1985). TAM presents two beliefs about a particular technology (perceived ease of use and perceived usefulness) that determine an individual's attitudes towards using that technology and drive an individual's intention to adopt the technology. Perceived ease of use is the degree to which an individual believes using the technology will be easy, and perceived usefulness is the degree to which an individual believes using the technology will be useful and enhance performance (Davis 1989). According to the suggested causal relationship in TAM, an individual will have a positive attitude towards using the technology if the individual perceives using the technology is easy and useful. Davis et al. (1992) extended the TAM model by adding an additional belief factor, perceived enjoyment, which is the degree to which an individual believes using the technology will be enjoyable. Consequently, the extended TAM suggests that three belief variables (i.e., perceived ease of use, usefulness, and enjoyment) play important roles in predicting attitudes about and intentions towards adopting a new technology (Davis et al. 1992).

According to Rauniar et al. (2014), a number of empirical studies have modified TAM to investigate users' behavioral intentions towards using a particular framework of technology. Researchers (Hsu and Lu 2004; Moon and Kim 2001; Saadé and Kira 2006) have also indicated that TAM can be extended to include antecedents that impact three belief constructs (i.e., perceived ease of use, usefulness, and enjoyment). For instance, Venktatesh and Davis (2000) included social influence processes to predict users' usage behavior of a new technology. Wu and Li (2007) integrated emotional factors such as care and anxiety to the TAM and found a positive emotional influence on the three TAM constructs. Rauniar et al. (2014) addressed how the psychological concept of social influence can be a critical component that the TAM does not take into account. Given the important role of social connections in social commerce (Hajli et al. 2017; Huang and Benyoucef 2013) and divergent perspectives towards the TAM, this study seeks to integrate social connectedness into the TAM.

A number of empirical studies have used the TAM as a theoretical foundation for adopting mobile technology (Ha and Im 2014; Kim et al. 2009; Ko et al. 2009; Nysveen et al. 2005), online commerce (Ha and Stoel 2009; Lee et al. 2006; Kim and Forsythe 2009; Tong 2010; Vijayasarathy 2004; Yu and Park 2014), and social commerce (Bounkhong and Cho 2017). In the social commerce context, perceived ease of use has been shown to have a positive impact on both perceived usefulness and enjoyment, but the influence of perceived ease of use was insignificant on attitudes towards social commerce (Bounkhong and Cho 2017). In addition, researchers have found perceived ease of use is a suppressor variable in the TAM model (Kim et al. 2017). A suppressor variable is "a variable that does not correlate with the dependent variable, but does correlate with independent variables" (Maassen and Bakker 2001, p. 243). Because the ambiguous role of perceived ease of use, this study does

not re-investigate this relationship in order to focus on a possibly different impact of social connectedness on the perceptions of social commerce.

Social connectedness and TAM variables

Social networking sites and other Internet-based services, allow individuals to share information and communicate with others within their online networks. These online tools have provided individuals with additional avenues of communication and have altered the landscape of human interaction. Individuals are fundamentally driven to seek out and maintain social ties to others, engaging in behaviors such as joining groups and reaching out to existing acquaintances (Baumeister and Leary 1995). To develop and maintain positive social relationships, individuals share similar interests and interact with others (Lee and Robbins 1995). Individuals who feel socially connected perceive others in the group to be friendly and actively engaged in social activities (Kohut 2009). Social connectedness is "belonging and relatedness, based on quantitative and qualitative social appraisals and relationship salience" (van Bel et al. 2009, p. 2). Establishing a sense of social connectedness is an essential facet of human life and one that boosts various aspects of psychological wellbeing (Mauss et al. 2011).

In the online environment, social connectedness can stem from the use of social media (Grieve et al. 2013), especially for individuals who join and use social networking sites for the purposes of finding information, sustaining friendships, and making connections with others (Bonds-Raacke and Raacke 2010). Individuals are likely to feel connected when they share their similar interests and opinions on social networking sites. Feeling of connectedness among social media users would lead individuals to perceive shopping through social media is easy, useful, and enjoyable. Kwon et al. (2014) found that perceived connectedness greatly effect on perceived usefulness in Facebook. Further, online social interactions are associated with both utilitarian (i.e., information acquisition) and hedonic (i.e., playfulness) values that lead to positive behavioral intentions (Yuksel et al. 2016). These supportive interactions among social media users motivate them to exchange information and express emotional concerns (Liang et al. 2011). For instance, when consumers are socially connected through social media, they interact with other consumers by sharing utilitarian shopping information, such as quality of products and reliability of the seller. Sharing this information elevates the consumer's utilitarian shopping experiences by providing information that impacts the consumer's perception of ease of use and usefulness in the social commerce shopping experience. In addition, consumers may share hedonic experiences like having fun and receiving compliments when wearing the product to an event. This shared information not only is useful in terms of reducing other consumers' risks when making purchases, but it also adds to a sense of entertainment and enjoyment. When consumers feel socially connected, they interact more with other users in social media platforms (Liang et al. 2011). For that reason, consumers are more likely to perceive social commerce as easy and useful (utilitarian value) as well as enjoyable (hedonic value) resulting from interaction with others and a sense of belonging that are fundamental to the social commerce platform. Thus, the following hypothesis was proposed.

H1 Social connectedness positively influences perceived (a) ease of use, (b) usefulness, and (c) enjoyment of social commerce.

TAM variables and attitudes towards social commerce

The TAM (Davis et al. 1992) model suggests an individual's attitudes towards using a new technology is affected by his or her perceptions of the ease of use, usefulness, and enjoyment of the technology. If an individual perceives a technology to be easy to use, useful, and enjoyable, the person forms positive attitudes about using the technology. Although empirical research has found that perceived usefulness and enjoyment positively influence attitudes about technology use, there are mixed results showing the impact of perceived ease of use on attitudes. For example, some researchers (Chen and Tan 2004; Chen et al. 2002; O'Cass and Fenech 2003; Vijayasarathy 2004) found that perceived ease of use with online shopping positively influences attitudes while other studies have shown an insignificant effect of perceived ease of use on consumers' attitudes towards online commerce (Cho and Fiorito 2009; Ha and Stoel 2009; Liu et al. 2003; Yu and Park 2014). Perceived usefulness of the shopping process, however, positively affects attitudes towards online shopping (Cho and Fiorito 2009; Ha and Stoel 2009; Kim 2012) as well as attitudes towards mobile shopping (Kim et al. 2009; Nysveen et al. 2005; Snowden et al. 2006; Yang 2012). The perception of ease of use, usefulness, and enjoyment of image interactivity technology has been shown to positively affect attitudes towards online retailers (Lee et al. 2006). Consumers' perceived enjoyment of the online co-designing process produces positive attitudes towards online co-design practice (Yu and Park 2014) as well as positively influencing attitudes towards adopting mobile commerce (Yang 2012). With this positive relationship between belief constructs and attitudes, it is logical to predict the effects of these belief constructs on attitudes towards social commerce. Thus, the following hypothesis was proposed.

H2 Perceived (a) ease of use, (b) usefulness, and (c) enjoyment of social commerce positively influence attitudes towards social commerce.

Attitudes towards social commerce and intentions to adopt social commerce

The theory of reasoned action (Fishbein and Ajzen 1975) suggests a causal relationship between attitudes and intentions to perform a behavior. When an individual has a positive attitude towards performing a particular behavior, the person becomes willing to execute that behavior. Likewise, a favorable attitude towards using a technology results in the adoption and usage of that technology (Davis 1989). In this study, attitude is regarded as the extent to which the consumer is willing to adopt social commerce. Many researchers have established the positive association between attitudes and intentions when it comes to online apparel shopping (Chen and Tan 2004; Chen et al. 2002; Lee et al. 2006; O'Cass and Fenech 2003; Vijayasarathy 2004) and mobile shopping (Kim et al. 2009; Nysveen et al. 2005; Snowden et al. 2006; Yang 2012). Similarly, social commerce studies have discussed the positive influence of attitudes on purchase intentions

(Bounkhong and Cho 2017; Zhang and Benyoucef 2016). Based on findings from these studies, the following hypothesis was proposed:

H3   Attitudes towards social commerce positively influences the consumer intentions to adopt social commerce.

Methods

Sample and data collection

Social commerce represents commercial activity that is affected by the interaction of social media users (Liang et al. 2011; Yadav et al. 2013). Therefore, using social media is a prerequisite for being connected to social commerce. Most college students (98%) are social media users (Griffin 2015) and involved in purchasing processes (i.e., sharing pre and post purchasing experiences, consuming products direct through social commerce) through interactions in social media. Thus, this study recruited students from five academic courses at a large university in the US to examine the role of social connectedness in the process of adopting social commerce in apparel shopping. After receiving approval from the Institutional Review Board (IRB), a self-administered, online survey was administered to collect data. Researchers recruited voluntary participation through an email invitation that included a description of the research and a URL to access the online survey. As an incentive for participation, students received 5 extra credit points (of 1000) added to their course grade. This study requires that participants should be an active social media users. To screen social media users, the following questions were asked; "Do you consider yourself to be an active user of social media?" (Yes or No), "What types of social media do you currently use?", "What is your favorite social networking site that you most frequently use?", and "How often do you visit the social networking site per day?" A total of 768 email invitations were sent to class lists by the course instructors, and participants were given 7 days to log onto the website to complete the survey. Of the 768 recruited students, 524 students completed the online survey, representing a 68% response rate. Of the completed surveys, 79 responses were eliminated due to significant missing data and/or respondents' lack of experience with social media. Participants who reported being active social media users by indicating that they actively used social media more than twice a day. In final, a total of 445 responses that indicated experience with browsing and purchasing of apparel products from social media networking sites were used for analyses in this study.

Survey instruments

Reliable and valid scale items were adopted and modified to measure the six variables within the survey. The survey contained seven sections: (a) social connectedness, (b) perceived ease of use of social commerce, (c) perceived usefulness of social commerce, (d) perceived enjoyment of social commerce, (e) attitudes towards social commerce, (f) intentions to adopt social commerce, and (g) demographics (see Table 3). All scale items except demographic information were measured using a 5-point Likert-type scale (1 = *strongly disagree* and 5 = *strongly agree*). Before answering questions in the survey, participants were asked to indicate their experience with social media. Grieve et al.

(2013) online social connectedness scale, which modified offline social connectedness (Lee et al. 2001) was adopted to measure social connectedness online. The Cronbach's alpha value was .92.

Twelve items were adopted from two studies (Davis et al. 1992; Kim et al. 2009) to measure the three TAM variables: (a) perceived usefulness of social commerce, (b) perceived ease of use of social commerce, and (c) perceived enjoyment of social commerce. The Cronbach's alpha values for the five-item perceived usefulness scale was .92; for the five-item perceived ease of use scale, it was .92, and for the six-item perceived enjoyment scale, it was .95 (Kim et al. 2009). Spears and Singh's (2004) seven-item attitude scale was adopted for this study, and the Cronbach's alpha value for the scale was .95. A five-item intention scale developed by Engel et al. (1995) and Wakefield and Baker (1998) was adopted from Lee et al. (2006). The reliability of the scale was .97 (Lee et al. 2006).

Data analyses

Data was analyzed using SPSS 23 and Mplus 7.0. First, demographic variables were analyzed using descriptive statistics (e.g., frequency). Second, exploratory factor analysis (EFA) was conducted to evaluate dimensionality of each variable (i.e., social connectedness, perceived ease of use, perceived usefulness, perceived enjoyment, attitudes, and purchase intentions). Third, a Cronbach's alpha coefficient for each of the six measures was calculated to assess reliability and test discriminant validity of the constructs. Fourth, the Pearson correlation coefficient, means, standard deviations, and average variances were calculated to determine the direction and magnitude of the relationship between variables. Fifth, confirmatory factor analysis (CFA) was performed to ensure the factor structure of each variable and to test a measurement model. Finally, the three proposed hypotheses in the conceptual model were tested using structural equation modeling (SEM).

Results

Participant characteristics

A total of 446 college students (24.5% male, 75.5% female) between the ages of 18 and 24 completed the online survey. The majority of respondents (84.3%) were Caucasian American college students in southern US. The students were from diverse majors: Agricultural, Food and Life Sciences, Arts and Sciences, Business, Education and Health Professions, and Engineering. Slightly less than half of the participants (45.9%) reported their annual household income exceeds $100,000. Participant characteristics are presented in Table 1. The most preferred and frequently used social networking site was Instagram (56%) followed by Facebook (18%) and Twitter (10%). Almost 60% of participants indicated they have visited social media networking sites five or more times a day over the last year. About half of participants reported they had purchased fashion products through social commerce, and nearly 30% of participants reported having purchased one to ten items through social commerce in the last year.

Preliminary data analyses

EFA, using principle axis factoring with varimax rotation, determined the number of factors for each construct. Except for social connectedness, one factor was extracted

Table 1 Demographic characteristics of participants (n = 446)

Participant characteristics	Frequency	Percent (%)
Gender		
Male	109	24.5
Female	335	75.5
Age		
18–24	440	98.7
25–29	2	.4
30–34	4	.9
Ethnicity		
Native American Black or African American	6	1.3
Asian American	13	2.9
Hispanic or Latino	11	2.5
Caucasian or European	24	5.4
American	375	84.3
Two or more races	10	2.2
Other	6	1.3
Annual income		
$0–24,999	58	13.1
$25,000–49,999	52	11.7
$50,000–74,999	57	12.8
$75,000–99,999	73	16.4
$100,000 or more	204	45.9

with an Eigenvalue greater than 1. Items were retained if standardized factor loadings were above .50 on the factor but below .30 on the other factors (Nunnally and Bernstein 1994). Based on factor loading ($\geq$ .50), seven of the twenty items for the social connectedness factor were retained. All factor loadings of the retained items for the three TAM variables, attitudes, and intention were greater than .54. Cronbach's alpha coefficient was calculated to determine reliability of each construct with an acceptable level of coefficient of .70 to retain the items in the scale for variables (Cronbach 1951). Each construct demonstrated satisfactory internal consistency with a Cronbach's alpha value of α = .79 to .94, indicating a high level of reliability for the scale items. Further, the Pearson correlation coefficient tested the correlation between the constructs. As shown in Table 2, significant relationships were found between the constructs. The average variance extracted (AVE) from each construct was above .50 showing the variance captured by the construct was greater than the variance from measurement error (Fornell and Larcker 1981). These satisfactory AVE values achieved convergent and discriminant validity of the constructs. The AVE scores of all constructs (.50–.75) were higher than the square of the correlation (R2: .12–.44) among the constructs, confirming that each construct has discriminant validity (Chin 1998; Hair et al. 2012).

Measurement model assessment

Prior to testing the measurement model, a CFA was conducted to assess the factor structure for all variables using a maximum-likelihood estimation in Mplus 7.0. The modification indices were examined to determine if random error terms for two measures were highly correlated with one another, then the item with the lowest factor loading on the

Table 2 Results of correlation coefficients between the constructs

Constructs	SC	PE	PU	EJ	AT	IN
Social connectedness (SC)	1					
Perceived ease of use (PE)	.38**	1				
Perceived usefulness (PU)	.27**	.63**	1			
Perceived enjoyment (EJ)	.36**	.66**	.67**	1		
Attitudes (AT)	.31**	.61**	.61**	.75**	1	
Intentions (IN)	.34**	.59**	.65**	.66**	.65**	1
Mean	10.27	11.47	10.86	11.23	10.93	10.54
Averaged mean	2.05	2.29	2.17	2.25	2.19	2.11
SD	2.01	2.04	2.44	2.22	2.26	2.57
R^2	.12	.35	.42	.44	.42	–
AVE	.50	.51	.54	.71	.75	.72

** $p < .01$

construct was removed to improve model fit (Brown 2006). According to CFA results, one item was removed from the perceived usefulness scale on the basis of the modification indices for the residual matrix. All standardized factor loadings ranged from .55 to .91 with significant *t*-values ranging from 13.63 to 80.00 ($p < .001$).

To analyze the fit of the measurement model for six latent variables, three item parcels were created for each latent variable by balancing the average loadings of each parcel on the factor. The extracted items were assigned to parcels for each variable based on the factor loadings from the CFA (Russell et al. 1998). Research using item parcels resulted in a better fit of the measurement model because the results were not influenced by characteristics of the individual items (Russell et al. 1998). The fit of the measurement model was examined using a maximum-likelihood estimation procedure in Mplus 7.0. Goodness-of-fit was evaluated using Chi square with the following indicators and cut off values for good fit: the comparative fit index (CFI ≥ .95), root mean square error of approximation (RMSEA ≤ .06), and standardized root mean square residual (SRMR ≤ .08; Hu and Bentler 1999). The model fit the data well: [$\chi^2 = 223.70$ ($df = 120$), $p < .001$], CFI = .98, RMSEA = .04, SRMR = .03. All parameter estimate *t* values were greater than 22, establishing statistical significance (Byrne 2012). In addition, composite reliability (CR) values ranged from .80 to .94 and were above the .70 minimum value recommended (Hair et al. 2006). This indicates that all constructs are reliable measures in the measurement model. Table 3 shows CFA results with factor loadings, Cronbach's alpha, and CR for all constructs.

Structural model assessment and hypotheses testing

The fit of the structural model was assessed using the maximum-likelihood estimation procedure in Mplus 7.0. The six-factor structural model yielded a satisfactory fit to the data: [$\chi^2 = 305.87$ ($df = 125$), $p < .001$], CFI = .97, RMSEA = .06, and SRMR = .06. As predicted, all of the standardized path coefficients were positive and statistically significant ($p < .001$) (see Fig. 1). The results show that social connectedness positively influences perceived ease of use, perceived usefulness, and perceived enjoyment, supporting H1a, b, and c, respectively. Social connectedness has the strongest relationship with perceived ease of use ($\beta = .46$, $t = 9.54$, $p < .001$), followed by perceived enjoyment ($\beta = .40$, $t = 8.59$,
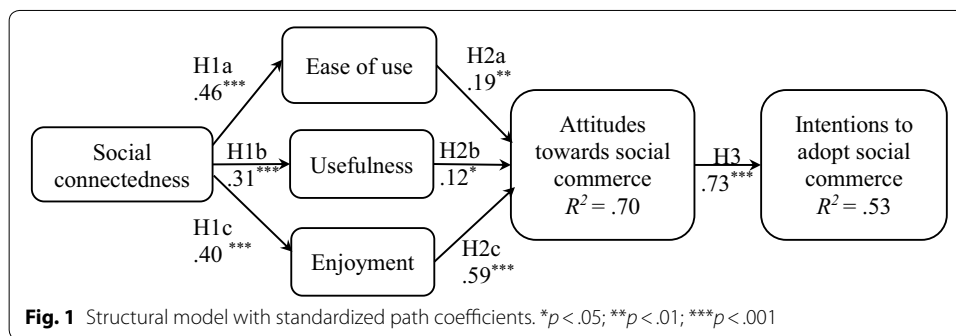
Table 3 Results of CFA and reliability test for variables (n = 446)

Constructs	Scale items	Factor loading	Cronbach's alpha	CR[a]
Social connected-ness	I feel close to people on social media	.59	.79	.80
	I see social media friends as friendly and approachable	.55		
	I feel understood by the people	.62		
	I know when I am on social media			
	I am able to relate to my social media friends	.66		
	I find myself actively involved in social media friend's lives	.66		
	I am able to connect with other people on social media	.55		
	My social media friends feel like family	.58		
Perceived ease of use	Use of social commerce		.83	.84
	Is clear and understandable	.70		
	Does not require a lot of mental effort	.68		
	Is easy for me to become skillful	.71		
	At shopping for fashion products			
	Allows me to shop the way I want to	.72		
	Is easy to learn	.75		
Perceived usefulness	Use of social commerce		.89	.89
	Increases my productivity	.84		
	In shopping for fashion products			
	Enhances my effectiveness	.90		
	In shopping for fashion products			
	Useful in shopping for fashion products	.80		
	Improves my shopping skills	.73		
	For fashion products			
Perceived enjoyment	Shopping for fashion products through social commerce is		.93	.94
	Entertaining	.84		
	Enjoyable	.89		
	Interesting	.80		
	Fun	.89		
	Exciting	.83		
	Appealing	.79		
Attitudes towards social commerce	When I shop for fashion products, social commerce is		.94	.94
	Appealing	.88		
	Good	.88		
	Pleasant	.87		
	Favorable	.82		
	Likeable	.87		

Table 3 (continued)

Constructs	Scale items	Factor loading	Cronbach's alpha	CR[a]
Intentions to adopt social commerce	I intend to buy fashion products through social commerce	.79	.93	.94
	I'd be willing to buy fashion products through social commerce	.84		
	I'd be willing to recommend my friends to buy fashion products through social commerce	.85		
	I would visit social commerce to buy fashion products again	.91		
	In the future, I would be very likely to shop using social commerce for fashion products	.87		

[a] Composite reliability (CR): above the .70 minimum value is recommended (Hair et al. 2006)

Fig. 1 Structural model with standardized path coefficients. *$p < .05$; **$p < .01$; ***$p < .001$

$p < .001$), and then perceived usefulness ($\beta = .31$, $t = 5.98$, $p < .001$). The three TAM variables significantly and positively influence attitudes towards social commerce supporting H2a, b, and c. Perceived enjoyment has the strongest impact on attitudes ($\beta = .59$, $t = 10.80$, $p < .001$), followed by perceived ease of use ($\beta = .19$, $t = 3.07$, $p < .05$), and then perceived usefulness ($\beta = .12$, $t = 2.04$, $p < .05$). To evaluate the significant path difference of perceived usefulness and enjoyment for attitudes, the equality of the two path coefficients is tested by comparing the restricted and default models. The results of Chi square difference test ($\Delta\chi^2 = 88.13$, $\Delta df = 1$, $p < .001$) confirmed the significant effect of perceived enjoyment on attitudes towards social commerce. As a final point, attitudes significantly and positively impact intention towards adopting social commerce ($\beta = .73$, $t = 28.28$, $p < .001$).

Post hoc analysis: mediating effects

The proposed model shows that social connectedness has a significant effect on perceived ease of use, usefulness, and enjoyment of social commerce. Moreover, the three TAM variables each significantly and directly affect attitudes towards social commerce. These results suggest that the three TAM variables mediate the relationship between social connectedness and attitudes towards social commerce. This study tested these potential indirect effects using the bootstrapping method (Shrout and Bolger 2002). The indirect effects were found to be significant at the $p < .05$ level because the 95%

confidence intervals did not include zero. The effect of social connectedness on attitudes towards social commerce (a) through perceived ease of use ranged from .01 to .19, (b) through perceived usefulness ranged from .05 to .23, and (c) through perceived enjoyment ranged from .45 to .65. The total indirect effect of social connectedness through three TAM variables on attitudes towards social commerce was positive and significant (.80, $p < .001$), but the direct effect of social connectedness on attitudes towards social commerce was not significant. These results confirm the mediating effect of the three TAM variables on attitudes towards social commerce.

Discussion

The popularity of social media has given retailers and service providers opportunities to expand business through social commerce. While several retailers such as Tom's, Samsung, various airlines, and insurance companies have increased their profits through social commerce, there are some retailers (e.g., Walmart) that have failed to utilize social commerce (Hajli et al. 2017). This raises the question of what factors contribute to the success of social commerce among social media users. This study attempted to answer this question, and the results indicate that social connectedness influences social media users' perceived ease of use, usefulness, and enjoyment of social commerce, which then leads to positive attitudes towards social commerce and consumer intentions to adopt social commerce. This study also demonstrates the causal relationship between social connectedness and the three TAM variables, implying that social media users who feel connected with other users are likely to perceive social commerce as easy to use, useful, and enjoyable. Aligned with Liang et al. (2011), these results confirm that social connections within social media platforms encourage users to build a positive relationship with retailers or brands, which in turn, increases their positive attitudes and intentions to adopt social commerce in apparel shopping. Accordingly, the current study extends the literature by reporting that TAM provides valuable constructs to explain the effect of social connectedness on social media users' perceptions of social commerce, their attitudes towards social commerce, and intentions to adopt social commerce.

The empirical results provide theoretical contributions. The current study extends and revalidates the TAM model in the social commerce context. The CR of all constructs (i.e., social connectedness, perceived ease of use, usefulness, enjoyment, attitudes, and intentions to adopt social commerce) reflects reliable instruments that can be adoptable in the future studies. The results from the structural model highlight the importance of six constructs in explaining social media users' attitudinal and behavioral responses towards social commerce. The findings of the present study indicate that social connectedness strongly influences perceived ease of use, usefulness, and enjoyment of social commerce. This implies that the more social media users feel warmth and social support from other users, the more they perceive social commerce as easy to use, useful, and enjoyable. Perceived enjoyment shows a much stronger impact on attitudes towards social commerce than the other TAM variables. The results reinforce the importance of hedonic experience to social media users while they are shopping for apparel products through social commerce. These findings corroborate previous research about online shopping (Lee et al. 2006; Mathwick 2002) and apparel shopping in the social commerce context (Bounkhong and Cho 2017). Whereas previous findings indicate the effect of

perceived usefulness is stronger than the effect of perceived ease of use on attitudes in online commerce (Chen et al. 2002; Chen and Tan 2004; Davis 1989; Lee et al. 2006; O'Cass and Fenech 2003; Vijayasarathy 2004), findings of this study show the effect of ease of use is stronger than the effect of perceived usefulness on attitudes towards social commerce. Additionally, the results reveal that social connectedness does not produce a significant direct effect on attitudes, however social connectedness indirectly affects attitudes towards social commerce through utilitarian and hedonic perceptions of social commerce. The mediation effect of perceived ease of use, usefulness, and enjoyment is a new finding. Social media users who have positive attitudes towards social commerce are likely to purchase apparel products through social commerce. The results of present study suggests that social connectedness may be an effective way of generating positive attitudes towards social commerce and intentions to adopt social commerce.

Conclusions and implications

Findings in this study contributes to the literature about social commerce by demonstrating the importance of social connectedness among social media users in order to increase their adoption of social commerce. Social media allows for limitless communication among users willing to share similar interests and problems with other users (Labrecque et al. 2013; Patino et al. 2012). Social media users feel connected to other users by sharing interests, exchanging information and knowledge, and expressing emotions (Grieve et al. 2013). The strength of their connectedness increases the degree to which they share and influence other's decision making by liking, commenting, and tagging (Labrecque et al. 2013).

Retailers would be wise to develop communication tools that increase social connectedness among social media users. Beyond the "Like" button, incorporating emoji in marketing communications (e.g., Ikea and Coca-Cola) reinforces close relationships among users (Seiter 2017). To facilitate interactions and social connectedness among users, Facebook reactions allow social media users to react to posts using six different animated emotions (Chowdhry 2016). Much more than just cute icons, these reactions give users the ability to express themselves on Facebook beyond a simple thumbs up. Along with broadcast news, deals, and events on social media pages, social media networking sites should include elements that foster consumer engagement. For instance, Marshall's Pin Pals campaign randomly selects three of their most engaged Pinterest followers who make attractive style boards by pinning Marshall's products to receive a surprise gift box based on what they have pinned. Hence, increased consumer engagement through this campaign can enhance belongingness within the brand community, in turn developing and maintaining social interactions among the community members.

The results suggest that online social capital and sense of belonging in community can enhance social connectedness in social commerce. Social capital refers to the advantages that can be gained by building and maintaining networks of relationships (Putnam 2000). Social networks are used as a means to enhance social connectedness and social support in contemporary society, and they measure the number of ties individuals have on social media. Sense of belonging in a community is the belief that an individual belongs and feels connected to a group in which their needs are important (Ryan et al. 2017), and it is measured by how the person is seen and cared for within the group or community.

The number of connections on social media improves or enhances social connectedness amongst individuals. Consumers tend to share their resources (pre and post consumption experiences, knowledge about brands and products) with other users when they feel connected. Marketers should take note that online social capital indirectly helps consumers make purchase decisions through social commerce.

Taken together, the overall results suggest that social factors such as social connectedness can substantially influence individual factors such as consumer perceptions about social commerce. Consequently, marketers should choose suitable social networking sites that would optimize social interactions in an embedded virtual brand community. Compared to promoting independent websites, building an online brand community would be more effective to establish sustainable relationships between and with groups of members (Zaglia 2013). Online brand communities (e.g., Pampers Village and the Harley Davidson owners' group) can strengthen connections between brands and consumers as well as between their consumers to other social media users. Marketers can benefit from understanding factors that make social media users feel connected to other users and/or brands on social networking sites.

Limitations and recommendations for future research

We caution generalization of the findings of this study to reflect all US consumers because the sample was limited to college students at a mid-South university in the US. Older generations who have fewer social interactions and online purchasing experiences may have different perceptions (or motivations) towards adopting social commerce in apparel shopping. Additionally, consumers may seek different values when purchasing apparel products compared to purchasing other product categories that require a more cognitive process of consumption which would likely alter the impact of social connectedness in utilitarian (perceived ease of use and usefulness) and hedonic (perceived enjoyment) beliefs for adopting social commerce. Therefore, future research is needed to examine a more representative US sample of different generations as well as to provide a sample from the other countries. Further investigation is needed to explore contributing factors such as group buying, shared goals, trust, and volunteerism that may affect product purchases made through social commerce. Future studies should also test moderating effects on relationships in the proposed model such as gender, social media involvement, and shopping frequency.

Abbreviation
TAM: technology acceptance model.

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