Brand Value Co-creation in Social Commerce: The Role of Interactivity, Social Support, and Relationship Quality

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Abstract

A model of brand value co-creation by integrating its the antecedents of interactivity, social support, and relationship quality is proposed. Empirical data was collected from the brand pages from a social networking website in China. Structural equation modelling was adopted to analyze the data. The results demonstrate that interactivity, specifically, consumer-consumer interaction and consumer-seller interaction, positively affects social support, which in turn enhances consumers' intention to co-create brand value. The research contributes to the extant literature by providing an underlying understanding of how customers engage in brand value co-creation activities within social commerce context.

Keywords

Social commerce; brand value co-creation; interactivity; social support; relationship quality

1. Introduction

Social commerce is a new form of e-commerce business model, which integrates Web 2.0 and social technologies into commercial features that form an online environment. Social commerce is defined as "exchange-related activities that occur in, or are influenced by, an individual's social network in computer-mediated social environment, where the activities correspond to the need recognition, pre-purchase, purchase, and post-purchase stages of a focal exchange" (Yadav et al. 2013, p. 312). Many firms have adopted social commerce platforms to manage their products and brands since being acknowledged as an effective medium to communicate with their customers (Gensler et al., 2013; Yadav et al., 2013). For example, In China approximately 75% of consumers generate product reviews and recommendations at least once a month online and more than 300 million make a purchase after obtaining advise from their peers (Stein, 2014). This implies that brand value is facilitated by online consumers' tendencies and behaviors (Naylor et al., 2012) and could be co-created by consumer-consumer interactions (Wang and Hajli, 2014; Hajli et al., 2017a). While, however, a growing body of literature explores the effect of value co-creation on brand development (e.g., Prahalad and Ramaswamy, 2004; Vargo and Lush, 2004), there remains a paucity of knowledge about how brand value is co-created in social commerce and those factors that impact on consumers' intention to co-create brand value .

Prior research has focused on crafting unique brand relationships and customer experiences through the co-creation process, by demonstrating its nature and practices (e.g., Schau et al., 2009; Payne et al., 2009; Hatch and Schultz, 2010; Ramaswamy and Ozcanb, 2016), and by exploring consumers' motivations to participate (Xie et al., 2008; Payne et al., 2009; Roberts et al., 2014). Within the extant literature the process of brand value is co-creation by consumers in online brand

communities has been documented (e.g., Schau et al., 2009; Iglesias et al., 2013), but the issue as to why customers voluntarily participate has received limited attention (e.g., Nambisan and Baron, 2009). By examining the incentives that stimulate customers to devote their time to co-creating brand value, firms will be able to utilize social media investments to create new revenue streams (Roberts et al., 2014). While Roberts et al. (2014) have suggested that this can be achieved by providing new services but there is absence of knowledge about the factors influence customer's intention to engage in brand value activities.

Notably, within the brand management literature there has been calls for new lines of inquiry to develop measures that capture the essence of brand value co-creation (Merz et al., 2009). Brand value has been measured by a firm/goods-based or customer-based perspective using measures that focus on loyalty and equity (Keller and Lehmann, 2006; Leone et al., 2006). But, in the case of brand value co-creation there is absence on measure that considers this process. Bearing this in mind the research presented in this paper aims to fill this void by addressing the following questions: (1) what is brand value co-creation in the social commerce context? (2) what factors will affect consumers' intention to engage in brand value co-creation activities. In addressing these questions the research provides an underlying understanding of how customers engage in brand value co-creation activities within social commerce context.

The paper is structured as follows. In Sections 2 the brand value co-creation literature is reviewed. Section 3 the theoretical framework and research hypotheses that emerge from a detail review of the literature are introduced. The research method adopted and developed constructs for the research are presented in Section 4. The research findings and the analysis that is undertaken are

examined in Section 5. In section 6 the contributions of this study are discussed and implications for scholars and practitioners identified.

2. Theoretical Background

2.1 Understanding Brand Value Co-creation

Brand value co-creation is deeply embedded in the concept of value co-creation (Prahalad and Ramaswamy, 2004; Vargo and Lush, 2004). Prahalad and Ramaswamy (2004) have defined value co-creation is the collaboration between a customer and a supplier in the activities of co-ideation, co-design, and co-development of new products. Within the marketing literature, it is commonly acknowledged that values can be created in the co-creation process where customers shift from being a passive audience to an active partner working with the suppliers (Grönroos, 1997; Prahalad and Ramaswamy, 2000; Prahalad and Ramaswamy, 2004; Vargo and Lusch, 2004; Payne et al., 2009). In this instance, a shift from a goods dominant to a customer-centric logic emerges (Prahalad and Ramaswamy, 2000).

Prahalad and Ramaswamy (2000) posited that customers are the source of firm competence and that firms should offer more resources and activities to collaborate with them to maintain their long-term partnership, rather than focusing on producing core products. Drawing on the customer-centric (Sheth et al., 2000) and market-driven logic (Day, 1999), Vargo and Lusch (2004) proposed a service-dominant logic and arguing that customers become good co-creators of values when they engage in dialogue and interaction activities with their suppliers. The service-dominant logic concurs with earlier studies and posits that values are likely to be maximised as firms understand customers' value-creating processes and support them by providing full transparency with respect to product and firm information (Vargo and Lusch, 2004). Likewise, Prahalad and Ramaswamy

(2004) contend that the value creation between customers and suppliers is founded on a unique experience environment whereby customers engage in dialogue and interact with their suppliers as well as having access to their resources.

These paradigm shifts have enabled brand management to be viewed from lens of value co-creation with customers (Merz et al., 2009; Payne et al., 2009; Christodoulides and De Chernatony, 2010; Hatch and Schultz, 2010). Rather than unilaterally creating brand value by firms, collaborating with stakeholders (e.g., partners, suppliers, and employees) can facilitate customer-brand interactions and build sound brand relationships (Swaminathan et al., 2007). Merz et al. (2009) conceptualize this phenomenon as a new branding paradigm by adopting a stakeholder perspective. This has resulted in Merz et al. (2009) defining brand value co-creation as "creating brand value through network relationships and social interactions among the ecosystem of all the stakeholders" (p. 338). In addition, Hatch and Schultz (2009) argue that brand is driven by the co-creation of all stakeholders through a process of dialogue that is supported by interdependent activities such as buying and selling products.

Previous value co-creation and brand management research has paved the way for the investigation of brand value co-creation in this paper. Expanding on Merz et al.'s (2009) definition of brand value co-creation and applying it to the social commerce context, we define it as "co-created value through consumers' engagement in specific interactive experiences and activities in relation to a certain brand, triggered by the new design features of social commerce". Brand value co-creation is a multidimensional concept comprising the dimensions of customer engagement, value co-creation, and behavioural intentions towards a specific brand (Merz et al., 2009; Nambisan and

Baron, 2009). In this study, we view brand value co-creation as a behavioural intention outcome of our developed model.

2.2. Factors Impacting on Brand Value Co-creation

We theoretically anchor our work within the value co-creation literature and explore the factors that influence consumers' intention to co-create brand value using social support theory, relationship quality theory, and from the customer interactivity perspective.

2.2.1. Social Support Theory

Social support is defined as "the social resources that persons perceive to be available or that are actually provided to them by non-professionals in the context of both formal support groups and informal helping relationships" (Gottlieb and Bergen, 2010, p.512). The concept of social support is derived from social support theory. This theory explains how social relationship influences individuals' cognitions, emotions, and behaviors (Lakey and Cohen, 2000). Social support has been extensively examined within the realms of psychology, sociology and healthcare. From a psychology perspective, social support examines how individuals experience the feeling of being cared for, being responded to and facilitated by people in their social groups (Cobb, 1976; House, 1981). In the context of social commerce, social support can be emotional or informational. Emotional support is defined as "providing messages that involve emotional concerns such as caring, understanding, or empathy" (Liang et al. 2011, p. 72). Contrastingly, informational support refers to "providing messages, in the form of recommendations, advice, or knowledge that could be helpful for solving problems" (Liang et al. 2011, p. 72). These supports are core components of the social relationship network construct. For example, social networking sites such as

TripAdvisor, where the members regularly provide informational support to other travellers by creating content (e.g., travel experience and hotel rating).

2.2.2. Relationship Quality Theory

Relationship quality is defined as the intensity and tightness of a relationship (Hennig-Thurau et al., 2002; Palmatier et al., 2006). Relationship quality is conceptualized as a multi-dimensional consisting of three constructs (Garbarino and Johnson, 1999; Palmatier et al., 2006):

1. Trust: "a willingness to rely on an exchange partner in whom one has confidence" (Moorman et al., 1993, p. 82);

2. Satisfaction: a customer's overall emotional evaluation of the performance of a service/product provider (Gustafsson et al., 2005); and

3. Commitment: the desire to maintain a relationship (Moorman et al., 1993; Morgan and Hunt, 1994).

Relationship marketing research has tended to focus on the formation of actual partnerships between customers and service providers. For example, the higher the quality of relationship that is established the more positive the interaction will be with the customer, which can therefore contribute to fostering brand loyalty. Accordingly, Fournier (1998) model of relationship quality in the context of consumer product indicates that a robust relationship with customers can facilitate relationship stability. Furthermore, Fournier (1998) identified that consumers with high levels of commitment are more likely to commit to a brand that fosters relationship stability. Thus, we suggest that relationship quality plays a pivotal role in influencing a customer's intention.

2.2.3. Customer Interactivity

Interactivity is an important characteristic of social commerce. Drawing on the definition of interactivity developed by Steuer (1992), we define it in the social commerce context as: the extent to which consumers participate in social shopping activities, and as a result generate and share information with one another to reach a consensus within a social networking environment.

Interactions can be formed through social functions such as forums and communities, ratings and reviews, and referrals and recommendations. These functions are the key differentiators of social commerce from other forms of online business environments, which may impact users' perceptions and behaviors (Huang and Benyoucef, 2015; Kim and Park, 2013; Wang and Yu, 2017). Interactivity can be categorized on the basis of the feature, perception, and process approaches (McMillan and Hwang, 2002). The feature approach focuses on the media and technologies that provide human-to-human and human-to-computer communications (McMillan, 2000), while the perception approach emphasizes on "the ability of users to perceive the experience to a simulation of interpersonal communication and increase their awareness of tele-presence" (Kiousis, 1999, p. 18). The process approach contends that social interaction is "a two-way communication between source and receivers, or, more broadly multidirectional communication between any number of sources and receivers" (Pavlik, 1998, p. 137). For the purposes of this research, we adopt the process approach to categorize interactivity in social commerce into two perspectives: (1) consumer-consumer interaction; and (2) consume-seller interaction. Each of these captures a unique angle of interactivity, which are combined to reflect a holistic picture of customer interactions in a social commerce environment.

Consumer-consumer interaction is reflected by connectedness. Connectedness refers to "the extent to which users can share common interests and exchange useful information through such as online community, bulletin board, news group, online chatting room" (Lee, 2005, p. 167). In social commerce, consumers generate content such as video, discussion form posts, digital images, audio files, ratings, referrals and recommendations that are publically available to other consumers. These user-generated contents allow consumers to acquire more information and knowledge of a product and provide them with a communication channel to exchange and experiences with other consumers, thereby increasing their confidence and consequent willingness to purchase (Han and Windsor, 2011). A typical example is that on Fancy.com: next to each product a "Fancy" icon with a number count displays how many times an item has been clicked on by other members. Clicking on the "Fancy" icon adds the product to the customer's wish list. This allows other members who follow them to see this wish list and others who "fancy" the product. Such social buttons shared by consumers can provide informational and emotional support to to them as they create positive engagement and affect their decisions while shopping on social commerce sites.

3. Research Model and Hypothesis Development

Based on the insights that have been discussed above, we present our research model in Figure 1. This model aims to understand the nature of brand value and the process of co-creation and its antecedents in a social commerce environment. Specifically, we argue that interactivity (i.e. consumer-consumer interactions and consumer-seller interactions) positively affects social support, which in turn improves relationship quality. We also expect that social support and relationship quality have direct effects on consumers' intention to co-create brand value. Our proposed hypotheses are presented hereinafter
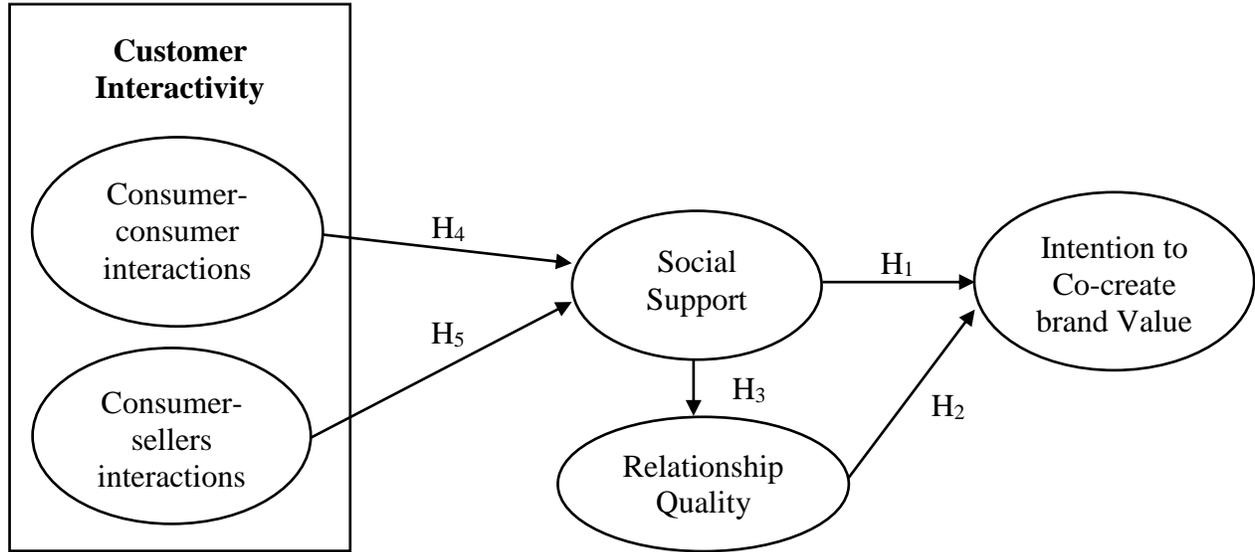
Figure 1. Research model

Prior research has indicated that brand value co-creation can be fostered by online social support in the social media environments (Cayla and Arnould, 2008; Schau et al., 2009; Hatch and Schultz, 2010; Gensler et al., 2013; Ramaswamy and Ozcan, 2016). For instance, Schau et al. (2009) have observed that multiple successful brand communities have established a process of collective value creation with their customers. Moreover, Schau et al. (2009) have suggested that brand value increases over time when:

- members in online communities engage in community activities (e.g., documenting, badging, and milestoning);

- effectively use social networking tools (e.g., welcoming and empathising);

- share brand use experience (e.g., commoditising and caring for the brand); and

- manage the impression of the brand (e.g., sharing the brand "good news" and inspiring

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others to use a certain brand).

LEGO Group's online brand community is a typical example of brand value co-creation value (Hatch and Schultz, 2010). Online communities have enabled LEGO's users to engage in dialogue and interactions with one another. LEGO's brand communities also allow fans to organise celebrations of the product's brand. During a celebration event, LEGO's users can discover new product features and ideas from the information shared between users. Similarly, Payne et al. (2009) found that a booking system with brief tutorials for a car rental process assisted customers to understand how to obtain the additional membership benefits, thereby enhancing and improving co-creation activities and outcomes. In consideration of previous research, we posit that:

Hypothesis 1: Social support is positively associated with consumers' intention to co-create brand value on brand pages.

With advances in technology, interactive relationships in online communities can become anonymous, impersonal, and automated with a social commerce environment (Wang and Emurian, 2005). People are more willing to participate in forums and communities, share their experiences and knowledge, and leave their advice and recommendations for other members to consider. This is because they perceive strongly the feelings of trust, satisfaction, and commitment in this community (Hajli et al., 2017b). Liang et al. (2011) applied a relationship marketing lens to elucidate the role of relationship quality within the context of social media context and revealed that it had a positive impact on the purchasing intentions of online consumers'. Similarly Pentina et al. (2013) demonstrated the positive effect of brand relationship quality within a social media

context based, specifically the likelihood of consumers intention to continue and recommend using brands. Consequently, relationship quality can be a predictor of a social commerce community member's intention to co-create brand value. This leads to the following hypothesis being proposed:

Hypothesis 2: Relationship quality is positively associated with consumers' intention to co-create brand value on social commerce sites.

Social support theory stresses that its effects cannot be separated from relationship processes that often co-occur with its use (Lakey and Cohen, 2000, p. 29). The formation of social support mechanisms should be linked with interpersonal processes and its constructs (Lakey and Cohen, 2000). Users in a social commerce platform may consider relationship quality to be guaranteed if they feel that people within an online community can provide substantial support to them (Liang et al., 2011). This implies that strong perceptions of social support within communities will influence users' behavior so that they may be willing to interact with others, thereby enhancing the relationship quality. Following this logic, we theoretically combine two theories (i.e., social support and relationship quality theories) together and examine the impact of social support on relationship quality. Thus, this leads to the following hypothesis be proposed:

Hypothesis 3: Social support is positively associated with consumers' perceived relationship quality on social commerce sites.

Previous research has explored the impact of interactivity on social support in online settings. Saenger et al. (2013), for example, proposed that consumers are encouraged to express their self-concepts and share their experience and information with others by using social technologies such as social media and online communities. The information provided by consumers is akin to being word-of-mouth communication, which provides support to consumers when they are making purchasing decisions (Saenger et al. 2013). In social commerce, we argue that the more consumers share their product information within such sites, the higher the level of social support that will be achieved. Thus, we posit that:

Hypothesis 4: Consumer-consumer interactions are positively related to social support on social commerce sites.

Another form of social interaction within the online shopping context is between the consumer-and seller. This interaction involves two interactive activities. Firstly, asking consumers to provide personal information as input for the shopping process (Gvili and Poria, 2005) and secondly is providing consumers marketer-generated contents (MGC) to assit them to judge whether a product or service is likely to satisfy their consumption goal (Goh et al. 2013; Scholz et al., 2013). The MGC created by sellers can trigger a discussion about the products or services and allow consumers to commence new conversations when responding to sellers (Kim and Park, 2013). Consumer-seller interaction enables companies to communicate with their customers through MGC and thus provide support to engage in informed decision-making. Thus, the following hypothesis is proposed:

Hypothesis 5: Consumer-seller interactions are positively related to social support on social commerce sites.

3. Research Method

3.1. Sample Frame and Data Collection

This study employed a survey to collect primary data from Renren's brand pages in China. Renren is one of the largest Chinese social networking sites focusing on users whose age ranges from 13 to 30 years old. Approximately, one third of Chinese middle school students and 10 million white-collar users are members of this social networking site. Brands pages on Renren offer the similar features and functions as Facebook. Brand page managers can modify the brand pages, identify their members on Renren, and effectively deliver the message to them through their advertising system.

The potential participants for this study were Renren members who have been involved in at least one brand pages. Data were collected using an online questionnaire over a one month period. We randomly distributed 250 questionnaires to four popular information technology (IT) product brand pages of Renren. A total of 192 useable responses were received from 1000 invitations, which corresponds to a 19.2% response rate. Table 1 presents the demographical information of the respondents. Of the respondents to the online-survey, 50.52 % were male and 49.48% female; 82.29% possessed a Bachelor's degree, and 17.71% had earned a graduate level degree. Most respondents were under the age of 40 (85.94%).

To reduce common method bias, we followed the Podsakoff's et al. (2003) guide to design our survey and manage the data collection process. We then tested for bias statistically. Harman's one factor test (Greene and Organ, 1973) was used to determine if common method bias was a threat to the validity of this study's results. The unrotated factor solution indicated that the maximum variance was 24.69%, with no factor accounting for 50% or more of the variance, which suggests that common method bias may not have been significant threat to the validity of our study.

Table 1. Demographics

Demographic	Range	Frequency	Percentage (%)
Age	20-29	121	63.02%
	30-39	44	22.92%
	40-49	15	7.81%
	50-59	12	6.25%
Gender	Male	97	50.52%
	Female	95	49.48%
Education Level	Graduate level degree	34	17.71%
	Bachelor degree	158	82.29%
Total Responses		192	100.0%

3.2.   *Measurement Development*

The survey instrument items were adapted from prior literature and modified as needed for this study, with the exception of a new scale of the intention to co-create brand value. Minor changes were made to the existing scale to make those more appropriate in the context of social commerce. Since the targets are the brand pages users in a China's social networking site. The questionnaire was translated into Chinese. A panel of academic experts who currently study Chinese social media examined the face validity of the items. Some modifications to the scales were made in order to match the Chinese context.

All items used a seven-point Likert scale (ranging from 1="strongly disagree" to 7="strongly agree"). Interactivity was measured by two constructs: (1) consumer-consumer interaction; and (2) consumer-seller interaction. The items for consumer-consumer interaction were simplified from the study of Hajli (2013) that explains customers' social interactions through social commerce tools and functions such as online forums and communities, ratings and reviews, and recommendations and referrals. The items for consumer-seller interaction were modified from the study of Kim and Park (2013), which emphasizes that marketer-related communication is a key important characteristic of social commerce. The items for social support were adopted from Liang et al. (2011) and measured two concepts: (1) emotional support; and (2) informational support, drawing from social support theory. Relationship quality was measured by three concepts: (1) trust; (2) satisfaction; and (3) commitment based on relationship marketing theory (Garbarino and Johnson 1999; Palmatier et al., 2006). Intention to co-create brand value, a new construct, was measured by the intention to co-create the value of the brand and co-construct unique branding experiences through social networking sites and the exchange of information and knowledge with other customers through social media. We asked participants to consider their behaviours and activities on the brand pages while answering the questions.

4. Data Analysis and Results

Given our research model and aim, SEM has several advantages over other analysis techniques such as multiple linear regression since it can examine proposed causal paths among constructs (Gefen et al., 2011). To this end, we had the option of employing covariance based structural equation modeling (CBSEM) or partial least squares (PLS) path modeling. We considered the

extant methods literature, our data characteristics, and study objectives to determine which technique to apply. For instance, scholars suggest that CBSEM is preferred when the study is confirmatory in nature (Gefen et al., 2011) and the parameter estimates obtained from CBSEM are purported to be less biased than the estimates obtained via PLS (Chin,1998). Considering the decision criteria presented in the extant literature (Reinartz et al., 2009; Gefen et al., 2011; Hair et al., 2011), we determined that a CBSEM approach would be most appropriate for our study. We analyzed the data using IBM Amos 20.

4.1. Descriptive Statistics, Reliability and Validity

Table 2 presents the means, standard deviations, Cronbach's alphas, average variance extracted (AVE), composite reliability (CR) and the construct correlations. With the exception two constructs, consumer-seller interaction (0.60, which is also greater than the acceptable threshold value of 0.6) and social support (0.69), all the values for Cronbach's alpha are greater than the threshold value of 0.70 (Hair et al., 2010). CRs range from 0.79 and 0.97, which are greater than the commonly accepted cut-off value of .70 (Hair et al., 2010), which indicates a satisfactory degree of internal consistency reliability for the measures. While the three items that have cross loading issue among the constructs and low factor loadings, as denoted in the Appendix, all items have a loading above the threshold of 0.7, confirming satisfactory convergent validity. Moreover, we checked whether each item loads more highly on its intended construct than on other constructs and whether each construct's square root of average variance extracted (AVE) is greater than its correlations with other constructs (Fornell and Larcker, 1981). The results in Table 2 indicate acceptable discriminant validity.

Table 2. Descriptive statistics and correlation

Variable	Mean	S.D.	α	CR	CCI	CSI	SS	RQ	ICB
CCI	3.46	1.51	0.74	0.84	0.64				
CSI	3.59	0.97	0.60	0.85	0.02	0.66			
SS	3.80	1.38	0.69	0.79	0.17*	0.22**	0.66		
RQ	4.50	1.25	0.85	0.95	0.07	0.02	0.23**	0.86	
ICB	3.97	1.34	0.90	0.97	0.09	0.07	0.35**	0.47**	0.91

Note: N=192; AVEs on diagonal
Legend: α: Cronbach's alpha; CR: composite reliability; CCI: consumer-consumer interaction; CSI: consumer-seller interaction; SS: social support; RQ: relationship quality; ICB: intention to co-create brand value)
*p<0.05, **p<0.01, ***p<0.001

4.2.   Measurement Model

The measurement model consists of five latent factors with 14 indicators. The model chi-square is statistically significant (χ^2 (67) = 80.681, p < .05). We also examined other measures of goodness-of-fit. The comparative fit index (CFI) is .986, which exceeds the cutoff value of .95 (Hu and Bentler, 1999) and the standardized root mean square residual (SRMR) is .045 which is less than .08 (Hu and Bentler, 1999). The root mean square error of approximation (RMSEA) is .033 which is less than .08 (Byrne, 1998). Thus, we conclude that our data adequately fit the measurement model.

4.3.   Structural Model

The hypothesized model fits the data well (χ^2 (71) = 82.024, p > 0.000, CFI = 0.988, GFI=.945; AGFI=.919; IFI=.989; RMSEA (90CI) = 0.029 (0.000, 0.053), SRMR = 0.0475). The five hypotheses presented earlier were tested collectively using SEM. Each indicator was modeled in a reflective manner (as in the CFA), the five constructs were linked as hypothesized. Model

estimation was done using the maximum likelihood technique. As denoted in Figure 2, all paths are significant at least .05 level. R^2 value for intention to co-create brand value was 35.8%, indicating adequate explanatory power (Hair et al., 2011).
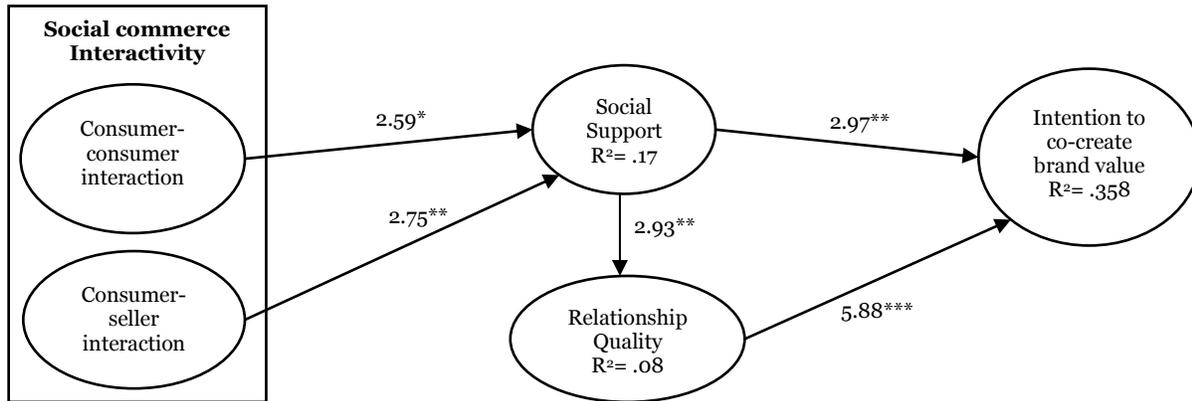
$(\chi^2 (71) = 82.024, p > 0.000, CFI = 0.988, GFI=.945; AGFI=.919; IFI=.989; RMSEA (90CI) = 0.029 (0.000, 0.053), SRMR = 0.0475)$

Figure 2. The result of structural model

5. Discussion

This research makes a contribution to the brand management and social commerce literature in several ways. User engagements and behaviors on brand development in social media have been emphasized in the existing brand management research (Habibi et al., 2014). The findings of prior studies highlight that customer-consumer interaction can actually facilitate value co-creation. In addition to consumer-consumer interaction, our model considers consumer-seller interaction as another type of social commerce interaction.

Our research demonstrates that the impact of consumer-seller interaction on users' social support is positively significant. This implies that sellers provide meaningful feedback and information related to products and services, which can positively contribute to enhancement of social support

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on China's brand pages. For example, Dell is one of the most popular brand public pages on Renren with more than one million users. Dell determines their brand's style and tone and communicates with their customers by creating a considerable content such as rotating banners at the top of page to display the story of Dell and current initiatives, product launching event announcements, and information about payment security and refund policies. Dell creates an environment that reinforces their customers' sense of active participation. Such an example demonstrates the possible positive association between consumer-seller interaction and social support (Scholz et al., 2013).

Our findings demonstrate that quality of social relationships in brand pages is influenced by social support. From a theoretical perspective, we incorporated social support theory from social-psychology and relationship quality from the marketing field into the social commerce context, and investigated their effects on a new concept of intention to co-create brand value. This implies that robust supportive interactions and relationships among users are the catalysts of social commerce success (Liang et al. 2011). Such a supportive climate will doubtlessly encourage members to act as brand spokesmen by disclosing their user experiences spontaneously and linking them back to their own personal pages. These supportive behaviors are most likely to enhance the quality of relationships among the communities' members. This finding indicates a strong link between social support theory and relationship marketing theory within the social commerce environment. Our results are in align with previous research (e.g., Laroche et al., 2012; Liang et al., 2011; Pentina et al., 2013), and suggests that the social commerce environment has the potential to enhance consumers' perceptions in terms of informational and emotional support. Once consumers receive support from the brand community, they will perceive a high degree of trust,

satisfaction, and commitment toward the brand page, which in turn increases the intentions to co-create brand value.

A new measurement for measuring the intention to co-create brand value was constructed and tested. It converged well and factor loadings are high, implying its an adequate measure. This scale could be used as an outcome or an intermediate construct that leads to actual action for future social commerce studies. Overall, we believe that the examination of relationships among social support, relationship quality and intention to co-create brand value contributes to theory and practice as it represents one important and under-studied aspect of social commerce.

6. Conclusion

Brand management in social commerce is a fertile area of research issue in the fields of information systems and marketing. The research presented in this paper proposes a new model of co-create brand value, which included a new concept explicitly capturing the key features of social commerce interaction and considered the roles of social support and relationship quality. Overall, our findings provide insights for managers to revisit the various features of their networking websites, by placing increasing emphasis on increasing two-way communications.

Future research should extend this study in a number of different ways. There is a need to improve the collection of data to increase its generalisation. For example, an interesting follow-up study may involve collecting data from global markets to examine cultural differences. We also incorporated social support and relationship marketing theories into co-create brand value through

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social commerce model. To the best of our knowledge, this is the first study to empirically examine the relationships between the proposed constructs for specific brand pages in the Chinese social commerce context. Larger and varied samples from different online communities such as professional-oriented brand community may offer more granular insights into how different communities and social media tools affect consumers' intention to co-create brand value.

Future research could also consider applying qualitative methods (e.g., content analysis and focus groups), exploring questions such as how consumers' behaviours are affected and to complement the insufficiency of survey method to make stronger inferences. Finally, as we suggest that consumers are evolving in co-creating brand value through interactivity, social support, and relationship quality, consumer brand engagement in social commerce would be a strong call for future research, by adopting the view of engagement (Brodie et al., 2013; Hollebeek et al., 2014).

To summarise, this research aims to examine how social commerce interactivity enables consumers on brand pages to better co-create brand value through the presences of social support and relationship quality. The empirical evidence supports our hypotheses and provided three major findings. Firstly, we empirically demonstrated that consumer-consumer interaction and consumer-seller interaction positively affect social support. Secondly, data indicated that social support positively correlates with relationship quality. Thirdly, evidence affirms the significant impacts of social support and relationship quality on consumers' intention to co-create brand value in social commerce environment.

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Appendix. Constructs and Items with Factor loading

Codes	Items	Factor Loading
Interactivity		
Consumer-consumer Interaction (Hajli, 2013)		
CCI1	I will ask my friends on forums and brand communities to provide me with their suggestions before I go shopping from a brand.	0.81

CCI2	I am willing to share my own shopping experience of a brand with my friends through ratings and reviews.	0.78
CCI3	I would like to use people online recommendations to buy a product from a brand.	0.78
CCI4	I am willing to recommend a product of a brand that is worth buying to my friends on the brand page.	Dropped
Consumer-seller interaction (Kim and Park, 2013)		
CSI1	The brand page keeps me informed of new development.	0.71
CSI2	The brand page listens to my feedback on its service.	0.74
CSI3	The brand page provides me with meaningful information.	0.70
CSI4	The brand page provides me with timely information.	Dropped
Social Support (Liang et al. 2011)		
SS1	When faced with difficulties, some people on the brand pages comforted and encouraged me.	0.73
SS2	When I encountered a problem, some people on the brand pages would give me information to help me overcome the problem.	0.87
SS3	When faced with difficulties, some people on the brand pages would help me discover the cause and provide me with suggestions.	Dropped
Relationship Quality (Liang et al. 2011)		
RQ1	I feel a sense of belonging to my favorite brand page.	0.70
RQ2	I am satisfied with using my favorite brand page.	0.88
RQ3	My favorite brand page is a reliable social networking site.	0.81
Intention to Co-create Brand Value (New Items)		
ICB1	I am willing to provide my experiences and suggestions when my friends on my favorite social networking site want my advice on buying something from a brand.	0.87
ICB2	I am willing to buy the products of a brand recommended by my friends on my favorite social networking site.	0.91
ICB3	I will consider the shopping experiences of my friends on my favorite social networking site when I want to shop a brand.	0.86