# JUXTAPOSING IMPACTS OF SOCIAL MEDIA INTERACTION EXPERIENCES ON E-COMMERCE REPUTATION

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# ABSTRACT

E-commerce enterprises use different social media channels to build their online reputation through customers' rich interaction experiences, but no study has differentiated the individual impact of consumer-to-consumer and business-to-consumer interaction features on e-commerce online reputations. This study investigates the linkage between five interaction characteristics, consumers' perceived values, and e-commerce online reputations. The results of our study show that only the perceived hedonic value has a significant influence on e-commerce online reputations. Perceived control, reciprocity, and responsiveness have a positive and significant influence on both perceived utilitarian value and perceived hedonic value. Sociability only shows a significant and negative influence on perceived utilitarian value. Personalization has a significant and positive influence on utilitarian value only. Perceived hedonic value mediates the influence of three interaction features (perceived control, reciprocity, and responsiveness) on both e-commerce cognitive and affective reputations. The implications of the study for research and practice are discussed.

Keywords: Social media; Cognitive reputation; Affective reputation; Interaction Experience; Utilitarian value; Hedonic value

# 1. Introduction

Consumers are facing higher risks and uncertainties in e-commerce environments and the reputation of an ecommerce enterprise is a critical indicator of its products'/services' quality [Mariconda & Lurati 2015; Ali et al. 2014; Bertarelli 2015; Hwang 2014]. As an important intangible asset, corporate reputation reflects the degree of public satisfaction with an enterprise's products and services [Brammer & Pavelin, 2006; Schwaiger, 2004]. It signals the company's sustainable competitive advantages, reduces stakeholder uncertainty [e.g. Walker & Dyck, 2014] and creates relational trust and confidence in products and services as well as advertising claims and buying decisions [e.g.

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Agarwal et al. 2015]. Companies have been incorporating interactive online media such as social media network (SMN) to promote their reputation and engage consumers and other stakeholders [Meng 2015; Cavazza et al. 2015; Claeys & Cauberghe 2015]. Social media tools facilitate interactions accompanied by a wide range of information exchange and easy access. Business-to-consumer social media interaction is for companies to communicate corporate reputation while consumer-to-consumer social media interaction is to garner stakeholders' feedback and generate noise in corporate reputation [Carroll 2013]. For example, companies may communicate product innovation and improved quality and performance as their competitive advantage over their peers in social media but those points may not match how customers see value. If customer evaluations are not aligned with corporate strategies (creating noise within corporate reputation) and cannot be correctly understood, companies will not know how to respond to different customer feedbacks. Electronic word-of-mouth (eWOM) in SMN can influence enterprise online reputation much more broadly and efficiently than ever. However, consumer comments in social media communities can also be a double-edged sword because positive comments on a company may lead to better evaluation of corporate reputation, negative visibility or inaccurate information diminishes a company's reputation [Park & Lee 2007]. Therefore, it is very important for organizations to understand and prepare for the challenges they must face to make the best use of social media in online reputation management.

Reputation is a stakeholders' attitude-like evaluation of a company based on data and the relationship between the company and its stakeholders [Walsh & Beatty 2007]. Consumers evaluate a business's reputation, not only based on the facts and information an organization conveys (e.g. financial performance) but also on its social facets (customers' interaction with the company). The social interaction experience can be affected by individual beliefs, values, and judgments, contributing to customer organizational reputation conceptualizations [Agarwal et al. 2018]. Studies have provided empirical evidence highlighting the social aspect of online shopping and the potential advantage of using technology to promote social interactions on e-commerce sites [e.g. Hajli 2015]. Extant literature also provides a plethora of empirical evidence on the positive relationship between overall interactivity and the organizations' online reputation. In the context of social media, prior studies have also focused on how the interactivity of social media apps and platforms affects e-commerce enterprises' online reputation. Highly contingent message interactivity and increase in perceived interactivity are found to be associated with positive consumer perception of organizations' reputations such as message credibility, instances of positive word of mouth, and feelings of identification with the company [Lee & Park 2013; Eberle et al. 2013; Floreddu et al. 2014; Guillory & Sundar 2014].

Although the importance of overall interactivity in website design and some other online channels is well recognized, there is a lack of systematic investigation of how and to what extent the different interaction characteristics of social media are linked to e-business reputation. The results of studies on overall interactivity provide less actionable guidance for reputation management through different platforms. For example, the drivers of reputation critical to various stakeholder groups (potential customers, existing customers, investors, etc.) could be different, and companies need to identify them first before they can develop effective reputation management strategies. In addition, there is a paucity of research on the influences of two different interactions (e.g. business-to-consumer and consumer-to-consumer) [Adjei et al. 2016] on different types of e-commerce online reputations. It is reasonable to assume that when designing social network channels companies would want to focus on different interaction features depending on the purpose and priority of reputation promotion campaigns so as to choose the most effective way to impact their stakeholders. Based on the theory of customer value [Woodruff 1997], our study endeavors to distinguish the interaction characteristics of social media operated by e-businesses in an effort to elucidate their specific influences on e-business reputation. In particular, we want to answer two research questions:

- 1. What is the influence of the five social media interaction attributes on the reputation of an e-business?
- 2. Do consumers' perceived utilitarian and hedonic values mediate the relationship between individual interaction attributes and e-commerce online reputation?

This study contributes to IS literature by disentangling the linkage between interaction characteristics, consumer perceived value, and e-business reputation that has not been supported by prior research. Different from extant studies that use a single interactivity construct, individual customer value indicator, or a general reputation indicator, we incorperate five different interaction characteristic and consider both hedonic and utilitarian value in our research model to study their linkages with the cognitive and affective reputation of e-commerce. The results of our study provide important new insight, and to our knowledge, the current study is also the first to use customer value theory in social media research. The implications of our results can help e-commerce companies optimize their online reputation management by choosing specific social media features with corresponding techniques for different marketing promotions. In particular, the delivery of customer perceived hedonic value rather than utilitarian value is more important for e-commerce reputation management through social media interactions. The remainder of the paper includes the literature review, hypotheses and research model development, followed by the analysis of survey data from 365 subjects, and concludes with the discussion of results, limitations, and implications for research and practice.

# 2. Literature Review

# 2.1. Online Reputation

Corporate reputation is defined as the sum of consumers' overall evaluation of a business [Walsh & Beatty 2007]. Existing literature on corporate reputation demonstrates diverse perspectives depending on the construct domain, dimensionality, and methodological operationalization. Most of the earlier reputation measurement scales such as the reputation quotient [Fombrun et al. 2000], customer-based corporate reputation [Walsh and Beatty 2007], corporate reputation scale [Helm 2005], and America's most admired companies index [Hutton 1986] are unidimensional scales that are highly influenced by historical financial performance data with a large numbers of items. Since all of these scales only produce one overall corporate reputation score, they are not useful for differentiating different types of corporate reputations as depicted in this study. Some studies propose that corporate reputation is an attitudinal construct consisting of cognitive and affective components [Hall 1992; Fombrun et al. 2000]. Furthermore, drawing on attitude theory, Schwaiger [2004] suggests that reputation can be split into cognitive and affective dimensions and empirically validated this assumption. In his study, the cognitive dimension of reputation is described as "competence" that includes indicators describing rational outcomes of a strong reputation such as performance and global reach. The affective dimension items assess the emotion that respondents have towards a company. In lieu of the multidimensionality suggested by Schwaiger, the most recent triadic organizational reputation scale offers a secondorder reflective model measuring implicit customer-based attitude towards corporate reputation [Agarwal et al. 2018], which claimes to be a holistic and parsimonious scale compared to existing longer measures. We chose Schwaiger's corporate reputation scale for our study due to its parsimony, multidimensionality, and availability for our investigation. Specifically, according to Lange et al. [2011], corporate reputation consists of three clusters: reputation as awareness, reputation as an asset, and reputation as assessment by customers and stakeholders. Reputation as awareness is directly visible and irrespective of judgment or evaluation. Reputation as an asset relates more to technical efficacy focusing on tangible outputs such as financial performance. Therefore the second reason for choosing Schwaiger's reputation measurement is its focus on customer's generalized favorability assessment of a company that is more pertinent to social media interaction experiences.

The increasing popularity of social media has posed a huge challenge for companies to manage their reputation [Schniederjans et al. 2013]. Prior studies have identified different factors influencing online reputation and put forth recommendations for online reputation management [van Noort & Willemsen 2012]. The recommended strategies associate with two major SMN interactions: customer-customer interaction and business-customer interaction (Adei, Nowlin, & Ang 2016). For customer-customer interaction, enhancing consumers' interaction experiences and boosting customer involvement in the online community improve consumer cognition about corporate reputation [Dijkmans et al. 2015; Eberle et al. 2013; Li et al. 2013]. For business-customer interaction, Eberle et al. [2013] posit that using interactive channels to communicate about corporate social responsibilities can improve corporate reputation, but firms need to monitor the interactive channels carefully because the detrimental impact of negative user evaluation on corporate reputation is much greater than that of positive evaluations [Adjei et al. 2016]. Lee and Park [2013] find that, regardless of their familiarity with the company, people evaluate organizations that respond faithfully to their comments as more trustworthy and committed. Compared to customers of organizations that did not respond, these customers have better control of mutuality and communal relationships and are more satisfied. Studies also demonstrate that business-to-consumer online communications affect a company's reputation positively [e.g. Aula 2011; Lee & Park 2013]. Companies need to be careful when investing in strategies for organization-customer communication. For example, Floreddu et al. [2014] claim that company communication styles should match the characteristics of the industry, and appropriate informal communication can become an effective way to improve business reputation, especially when the communication is conducted online. Yacouel and Fleischer [2012] suggest that firms could use online information agencies to effectively prevent and deal with reputation crises. Hung et al. [2012] build an online reputation management model and propose some responding strategies (centralized reputation systems, distributed reputation systems, regulations and strategies concerning employees, social responsibilities, and customer relationships) for organizations. Therefore, it is very important for companies to understand what, how, and to whom the interactions are conducted to nurture better corporate online reputation.

### 2.2. Online Interaction Experience

Online interaction refers to interactivity between parties [Liu & Shrum 2002], an important aspect of users' interaction with the technical features of e-commerce websites. High interactivity has been linked to purchase intention [Wu & Wang 2011], social network reliance and trust [Al-Shamaileh & Sutcliffe 2013], e-commerce loyalty [Cyr et al. 2009], overall attitude towards the company [Teo et al. 2003], and stronger identification with the company [Eberle, et al. 2013]. End-users' online interaction experiences in e-commerce can be categorized into two channels, mechanical interactivity and social interactivity [Stromer-Galley 2004; Qiu & Benbasat 2005]. The former refers to

the interaction between users and technology while the latter is the interactivity between participants of online communication. Social media channels provide various types of social interactions and networking features such as message posting, information exchange, and contact management. Since the unique technological features of social media platforms not only reflect the objective properties independent of the customers [Wang & Zhang 2012] but also the subjective properties as perceived by the customers [Jiang et al. 2010; Parboteeah et al. 2009], our study focuses only on consumer experience and behavior and refers to the subjective properties of social commerce platforms as experienced by the customers [Animesh et al., 2011]. Therefore, echoing some early definitions [i.e. Rice 1984], we define perceived interactivity as customers' perception that the social commerce environment can facilitate the interaction between them and the technology, allowing user control and access to information on the site in a variety of ways, which are both personal and responsive.

There are different operationalizations of interactivity in diverse research contexts [Jiang & Benbasat 2007; Lee 2005]. Mechanical interaction factors such as synchronicity, active control, connectedness, responsiveness, personalization as well as social interaction factors such as playfulness and reciprocal communication have been identified in different e-commerce studies [i.e. Liu 2003; McMillan & Hwang 2002; Song & Zinkhan 2008; Wu 2006; Yadav & Varadajan 2005]. Based on our review, features unique to social commerce platforms interaction cluster around five crucial elements, perceived personalization [Tam & Ho 2005], perceived control [Song & Zinkahan 2008], reciprocity [Chan & Li 2010], responsiveness [Liu 2003], and perceived sociability [Animesh et al. 2011; Zhang et al. 2014]. We choose perceived control, responsiveness, and personalization as the characteristics of consumers' media interaction with e-businesses. Reciprocity and sociality are selected as the characteristics of consumers' interaction with other consumers since they capture different aspects of an individual's interaction experience with the social commerce environment.

### 2.3. Customer Value Theory

Customer value is a well-researched marketing concept. According to customer value theory, customer value is a trade-off between the cost (e.g. price, time, privacy) and benefit (e.g. quality, utilities, information) of a product/service offering [Woodruff 1997]. Woodruff [1997] indicates that the customer value determination process includes a hierarchy (from attribute level to consequence level to goal/purpose level) and the desired customer value consists of preference for specific and measurable attributes and these value perceptions correlate with customer behavior, such as word-of-mouth and loyalty. Perceived value is consumers' preference, perception, and a combination of recognition and emotion [Gallarza et al. 2011] through actual experience of those products. Businesses and customers together build personalized service experience and create the perception of values through continual interactions between consumers and enterprises (Grönroos 2008), and among all stakeholers [Schau et al. 2009]. Specifically, Babin et al. [1994] point out that the process of trade could provide utilitarian and hedonic benefits. Therefore, utilitarian and hedonic value could be used to measure consumers' shopping experiences. In the context of social media, information seeking and updating [e.g. Hajli & Lin 2016], as well as the entertainment experienced through customer interactions [Dholakia et al. 2004], are the utilitarian and hedonic values most appealing to users. On the other hand, customers have to embrace the loss of personal control and privarcy to a certain extent. Consumers' perceived value forms in the process of interaction with consumers and companies [Chen & Dubinsky 2003]. In addition, scholars have validated that perceived utilitarian and hedonic value are critical for motivating consumers' behavior and affecting their cognitive and affective perception of the business and thus benefit their overall satisfaction [Carlson et al. 2015; Chiu et al. 2014; Kesari & Atulkar 2016].

Corporate reputation is a reflection of the degree of customers' satisfaction experiences with a company's products or services [Walsh & Beatty 2007] and consumers' satisfaction stems from their perceived value [Gallarza et al. 2011]. Customer value theory can help us understand the impact of consumer perceived value on corporate reputation through interaction experience over social media channels. It is reasonable to believe that consumers gain perceived value based on their interactions with e-commerce enterprises and other consumers over social media channels, leading to the overall evaluation of e-commerce enterprise reputation. Moreover, since consumers' social media network interaction experience is a value co-creation process [Vargo & Lusch 2008], we need to include both e-commerce companies and the consumers in this process. Therefore, we developed our research model by incorporating five social media interaction attributes, customer perceived values, and e-commerce enterprise reputations. In our model, the attribute level of customer value refers to the characteristics of consumers' interaction with companies and other consumers; the consequence level of customer value represents customer value perceptions gained in the interaction experience; the goal/purpose level customer value refers to consumers' resulting attitude tendency, namely, the consumers' evaluation of e-commerce enterprise reputation, based on their value experiences. The proposed model can help us understand the logical linkage among the attributes of consumers' social media interactions, consumers' experience of perceived values, and customer evaluation of e-commerce corporate reputation in a social media context.

# 3. Research Hypotheses and Model

## 3.1. Research Hypotheses

Perceived value is a consumer's overall judgment of a product based on his/her perception of product prices and benefits [Zeithaml 1988]. The choice of value dimensions is related to the context of the purchase. Both social media (social attributes) and e-commerce (business attributes) can influence consumer's perception of the value of an experience [Chen et al. 2018]. Through social media interaction and communication, consumers gain utilitarian value by garnering needed information and knowledge [Lanier & Hampton 2008]. At the same time, they also receive psychological and mental hedonic value when interacting with e-commerce companies and other consumers online [Zheng et al. 2017] because they can express and exhibit themselves freely ([Kaplan & Haenlein 2010; Gummerus et al. 2012] and enjoy the relaxing experience [Lanier & Hampton 2008]. For example, Caruana and Ewing [2010] validate that consumers' perceived value has a positive and significant impact on their perception of corporate reputation in the context of online shopping. In the same vein, Yoon et al. [2014] find that corporate reputation is influenced positively and significantly by consumers' perception of value. Thus, when consumers obtain more utilitarian and hedonic value, they not only recognize the company's capability but also will develop a positive emotional attitude towards the company. Therefore, both consumers' positive perception of corporate cognitive and affective reputation is nurtured. Accordingly, we propose the following hypotheses:

H1: Consumers' perceived utilitarian value positively influences the cognitive reputation (H1a) and affective reputation (H1b) of an e-commerce enterprise.

H2: Consumers' perceived hedonic value positively influences the cognitive reputation (H2a) and affective reputation (H2b) of an e-commerce enterprise.

Reciprocity in this study refers to consumers' perception of helpful information/comments provided by other consumers. It is an attribute of reciprocal communication between consumers [Chan & Li 2010]. Consumers interact with each other mainly by word-of-mouth that consists within user comments and information pertaining to corporate reputation. Based on this information, consumers make purchase decisions and adjust their perception of the online shopping experience. For example, a company may choose to keep both positive and negative social media posts about their products and services and make them available to more consumers. This approach may be interpreted as the company's sincerity in helping consumers make rational purchase decisions, thus enhancing consumer perceived reciprocity in consumer-to-consumer interactions. Consumers' perceived reciprocity of these interactions leads to their trust of e-commerce enterprises that use social media channels to spread the information of reciprocity [Aarikka-Stenroos & Makkonen 2014]. Hajli [2014] finds that the information support perceived by consumers influences their trust towards the company website, consumer commitment, and satisfaction, and finally improves their perception of value. In addition, Hansen et al. [2008] confirm that information-sharing activities associated with price comparison and new product approaching have a positive and significant impact on consumers' perceived value. Furthermore, Loane et al. [2015] find that information and emotional support from online medical community members could provide users with great utilitarian and hedonic values. Through different social media channels, e-commerce enterprises can facilitate effective information exchange environments to enhance the reciprocity of interactions between consumers and reduce the cost of information search during online shopping. Consumers are able to find products or services satisfying their needs and realize higher utilitarian value. Meanwhile, consumers can feel the emotional support from other consumers and enjoy sharing their delight/pleasure in a product [Wang et al. 2012], thus gaining strong hedonic value. Therefore, we posit:

H3: The reciprocity of consumer interaction positively influences consumers' perceived utilitarian value (H3a) and hedonic value (H3b).

Sociability is the degree to which companies provide social context support and promote social sharing through online communication channels [Animesh et al. 2011]. Social media facilitates strong social linkages between consumers through consumer-to-consumer interactions [Shen 2012]. An individual links to a social network to gain information exchange, social support, and friendship [Li et al. 2015]. Those interactions are also found to be linked with interpersonal relationships, trust, social cohesiveness, and sense of community [Kreijns et al. 2007; Zhang et al. 2017]. A high level of interactivity in social media networks can promote more discussions of issues and quick feedback on questions [Zhang et al. 2017], thus communicating relevant knowledge of products or services. In addition to basic social interaction features, other forms of social interaction such as consumers' mutual assistance and familiarity have been identified during consumers' participation in social network community activities [Ng 2013]. For example, consumers can find peers with similar consumption habits and purchase preferences and establish small community-like groups. They can conduct in-depth discussions about similar shopping experiences, share product-related information, obtain psychological support, and promote their sense of identity to that online community. A number of studies have shown the positive impact of sociality on consumer perceived value [Teo et al. 2003; Kuo &

Feng 2013]. Therefore, consumers benefit from the information gained and the interpersonal relationship established when interacting with consumers through social media channels, leading to perceptions of utilitarian and hedonic value. This underlying logic leads to a more refined perception of utilitarian and hedonic value. Thus, we posit:.

H4: The sociability in interactions between consumers positively influences consumers' perceived utilitarian value (H4a) and hedonic value (H4b).

Personalization, in general, refers to the capability to tailor products and services to users' unique desires and preferences, indicating the fit between website content and one's preferences [Tam & Ho 2005]. Consumers usually wish to be treated as unique individuals [Wieseke et al. 2012], and personalization of business-to-consumer interaction showcases e-commerce enterprises' capability to supply customized products and services matching consumers' idiosyncratic preferences and needs [Li & Karahanna 2015; Zhang et al. 2014]. Relevant and customized recommendations received through business-to-consumer interaction make customers feel that the e-commerce company cares and values them. Studies have found that personalized recommendations given by companies have a positive impact on consumers' perception of website utility. It can enhance consumers' perception of social value during online browsing, and satisfying both consumers' psychological and emotional needs [Kumar & Benbasat 2006]. These personalized interactions also reduce the time and psychology cost consumers spend on information search, eventually enhancing consumers' perception of utilitarian and hedonic value. Therefore, we propose that:

H5: The personalization in business-to-consumer interactions positively influences consumers' perceived utilitarian value (H5a) and hedonic value (H5b).

Responsiveness refers to the speed with which e-commerce enterprises respond to consumers' inquiries and concerns [Homburg et al. 2007; Liu 2003]. High responsiveness makes a website highly interactive and leads to positive consumer evaluation [Al-Shamaileh & Sutcliffe 2013], and fast response relates closely to consumers' perception of justice and value [Diefenbach & Hassenzahl 2011]. In the context of social media, e-commerce enterprises use online communities to provide quick responses to consumer swill enhance consumers' perceptions of utilitarian and hedonic value. Studies on social media use in the public sector indicate that responsiveness can enhance government transparency and accountability and encourage citizens' engagement in the policy process [Eom et al. 2018]. In the event of negative social network publicity, perceived firm responsiveness mitigates the negative impact on both negative word-of-mouth and patronage reduction [Adjei et al. 2016]. Therefore, we posit:

H6: The responsiveness in business-to-consumer interactions positively influences consumers' perceived utilitarian value (H6a) and hedonic value (H6b)

Perceived control refers to the extent to which consumers can participate in the "process of providing and receiving information and deciding the content of the information interaction" [McMillan & Hwang 2002]. In the context of social media, studies have shown that perceived control has significant influence over the alleviation of users' privacy concerns [e.g. Hoadley et al. 2010] and intention for information sharing [Hajli & Lin 2016]. The level of flexibility and liberty associated with e-business social media enables users to control the reception of product/service information and interactions with technology. Jiang et al. [2010] discover that perceived control has a close relationship with consumers' perceived value. The mode of information interactions such as UGC (usergenerated content) promoted by Web 2.0 and social media helps consumers control their interactions with companies, contributing to high responsiveness in business-to-consumer interactions. Consumers can freely choose the content of information interaction and control the time of interaction, therefore, avoiding overload of unrelated information and reducing the psychological stress associated with online browsing and shopping. Eventually customers' perceptions of utilitarian and hedonic value are enhanced. We argue that a high level of perceived control meets consumers' need to conduct information interaction, advances their perception of hedonic value, and gives consumers mental and psychological statisfaction. Therefore, we posit:

H7: Perceived control in business-to-consumer interactions positively influences consumer perceived utilitarian value (H7a) and hedonic value (H7b)

#### 3.2. Mediation Effect

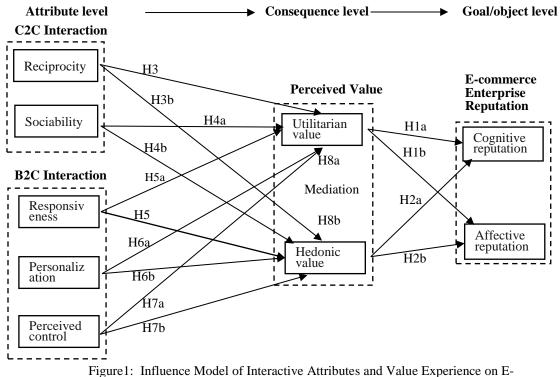
The two dimensions of company reputation, cognitive reputation and affective reputation refer to consumers' attitude-like rational recognition and emotional preference towards a company based on its characteristics, behavior, and customer experiences of interactions with the company and other stakeholders [Schwaiger 2004]. In marketing literature, purchasing is not only a utilitarian process to receive the functional benefit of products, but also a socially experiential process to gain hedonic benefits [Chiu et al. 2014]. Compared to indirect information about a company's reputation, consumers are apt to rely on their direct experience of interacting with the company [Shamma & Hassan 2009]. Social media network has been used by e-commerce companies to facilitate this direct connection through business-to-consumer interactions and consumer-to-consumer interactions. Interaction experience plays a critical role when evaluating corporate reputation [Barnett et al. 2006]. Interactions, participation, and sharing in social media

channels engender a high level of reciprocity and sociality in consumer-to-consumer interactions and make businessto-consumer interaction more personalized, controllable, and responsive [Chiu et al. 2014]. These appetitive experiences can prompt increases in consumer perception of utilitarian and hedonic value [Chang & Tseng 2013], influencing their evaluation of corporate reputation. According to customer value theory, consumers' experience of interactions with both the company and other consumers engenders higher consumer perception of values, resulting in a favorable evaluation of the company [Walsh & Beatty 2007]. The customer value hierarchy from marketing studies [Woodruff 1997] suggests that the specific customer-focused value experienced at the attribute level can lead to general long-term satisfaction through consequence level customer values. Therefore, we posit:

H8: Consumers' perception of utilitarian value (H8a) and hedonic value (H8b) will mediate the effect of reciprocity, sociability, personalization, responsiveness, and perceived control on the cognitive and affective reputation.

# 3.3. Research Model

Based on customer value theory, we propose a research model that depicts how interaction attributes influence ecommerce enterprise reputation through consumer use experience (perception of utilitarian and hedonic value) (Figure1). Reciprocity, sociability, responsiveness, personalization, and perceived control are the characteristics of an online interactive environment facilitated by e-commerce social media tools. It includes cost (e.g. time, privacy) and benefit (e.g. information, belonging), representing the "attribute level" of customer value. Utilitarian and hedonic values are consumers' psychological perception and subjective experience based on the interaction attributes, representing the "consequence level" of customer value. Cognitive and affective reputation are consumers' cognitive and emotional attitudes towards an e-commerce enterprise based on their perception of utilitarian and hedonic value, labeled as "goal/object" customer value. According to Woodruff [1997], attribute level customer value is more closely related to specific experiences in the short-term and the goal/object level customer value represents long-term commitment and loyalty to a company. This model explains the influence mechanism of the different interaction features on e-commerce online reputation. That is, business-to-customer and customer-to-customer interactions not only exert direct influence on customer value perception but also have indirect influence on e-commerce online reputation through customer value creation experience.



Commerce Enterprise Reputation

#### 4. Research Methodology

### 4.1. Sample and Data Collection

The context of this research consists of social media channels operated by e-commerce enterprises. To avoid systematic errors, popular online retail companies including Jingdong.com, Amazon.com, Weipinhui.com, and DangDang.com were selected as the object of research and all of the sample e-commerce enterprises chosen in our research use social media as a platform to interact with their customers.

The pilot study was conducted by launching online questionnaires in a leading online survey website in China and 156 completed questionnaires were received. The results of the validation test and exploratory factor analysis show that the Cronbach  $\alpha$  coefficient of all constructs is above 0.8. Nine common factors are extracted, explaining 79.19% of the total variations. Factor loadings of all measurements are above 0.45 [Coakes & Steed 2009], indicating good validity and reliability of the scales used in the pilot study. Next, a formal online survey was used to distribute the questionnaires to customers of the above-mentioned sample e-commerce enterprises. Altogether 345 questionnaires were completed and 43 unfit or incomplete questionnaires were dropped. The gender ratio was 50.61% male, which is in accordance with the gender attribution of online consumers in China [CNNIC 2017]. The detailed sample descriptive statistics can be found in Table 1.

Measure	Item	Count (N=302)	Percentage
Gender	Male	153	50.61%
	Female	149	49.39%
Age	<18	2	0.82%
-	18-29	258	85.30%
	30-39	35	11.43%
	>40	7	2.45%
Education	College and below	18	6.12%
	Bachelor	205	67.76%
	Master and above	79	26.12%
Occupation	Students	191	63.17%
	Corporate	62	20.4%
	Government	35	11.43%
	Self-employed	7	2.45%
	Other	7	2.45%
Monthly Income	<1000 RMB	153	50.61%
	1000-3000 RMB	62	20.41%
	3000-5000 RMB	44	14.69%
	5000-10,000 RMB	35	11.43%
	>10,000 RMB	7	2.45%
Frequency of online shopping	1-5 times	60	20%
per 6 months	5-10 times	73	24.08%
-	10-20 times	76	25.31%
	>20 times	92	30.61%

 Table 1: Sample Demographics

### 4.2. Construct Definition and Measurement

To ensure content validity, all scales used in this study were seven-point Likert scales (1 for "strongly disagree", and 7 for "strongly agree") adapted from well-established research instruments to suit the context of social commerce. The reciprocity and sociability scales were adapted from Chan and Li [2010] and Animesh et al. [2011], respectively. We borrowed the interaction scales for personalization and perceived control from Tam and Ho [2005], Liu [2003], and Song and Zinkahan [2008]. The perceived utilitarian and hedonic value scales were adapted from Chang and Tseng [2013]. We also adapted the enterprise reputation scales from Schwaiger [2004] for cognitive and affective reputation.

Since the original scales were in English, a back-to-back translation procedure was used to ensure translation validity. First, the English scales were translated into Chinese by a researcher whose native language is Chinese, and then the measurement items were back-translated into English by a different bilingual expert. The two English versions were then compared and modified before developing the final Chinese version of the items, ensuring that it is clear

and understandable with minimum discrepancy of information. Next, the revised scale was tested through a pilot study. The final scales and their sources are listed in Appendix 1.

# 5. Data Analysis and Results

We followed the two-step approach recommended by Hair et al. [2019]. The reliability and validity of the instrument were first verified and then the structural model analysis was conducted.

Since the same scales were used in the online survey, exploratory factor analysis was conducted to test the common methods variance in the sample data. The result showed that the largest common factor explained 23.96% of the variance, which meets the Harman single factor testify standards (below 25%) [Podsakoff & Organ 1986], indicating that none of the factors could explain the majority of the variances. Therefore, common method variance was unlikely a threat to the results.

SmartPLS 3.0 was used to analyze and test the research model. SmartPLS does not require normal distribution in the sample data and is appropriate for both exploratory and confirmatory research. In addition, the resampling technique in SmartPLS can provide a basis for the confidence intervals, making the estimated results of the study more reliable [Ringle et al. 2012].

# 5.1. Test of the Measurement Model

We performed a confirmatory factor analysis to further test the reliability and validity of the measurement model. As shown in Table 2, both Cronbach  $\alpha$  and composite reliability (CR) coefficient were above 0.8 and the standardized factor loadings were all above 0.7, indicating solid reliabilities of the scales [Chin 1998]. The average variance extractions (AVE) values of the constructs were above the recommended cut-off value of 0.5, showing strong convergent validity of the scales [Bagozzi & Yi 1988]. As displayed in Table 3, the square roots of the AVE for all constructs were greater than the inter-construct correlations depicted in the off-diagonal entries, suggesting satisfactory discriminant validity [Chin 1998].

Table 2: Reliabl	inty and Col	U	2			Cton Jac 1	
Construct	Item	Standard	AVE/	Construct	Item	Standard	AVE/
		Loading	α/CR			Loading	α/CR
	SOC1	0.89	0.816/	Perceived	PC1	0.809	0.683/
Sociability	SOC2	0.924	0.925/	Control	PC2	0.867	0.844/
(SOC)	SOC3	0.897			PC3	0.854	
	SOC4	0.899	0.946	(PC)	PC4	0.773	0.896
	CR1	0.819		Hedonic	HV1	0.938	0.852/
Cognitivo	CR2	0.842	0.701/	Value	HV2	0.935	0.912/
Cognitive Reputation	CR3	0.881	0.701/ 0.914/	(HV)	HV3	0.894	0.945
(CR)	CR4	0.892	0.914/		PER1	0.809	0.794/
(CK)	CR5	0.855	0.935	Personalization	PER2	0.867	0.794/
				(PER)	PER3	0.854	0.914/
	AR1	0.902			PER4	0.773	0.939
Affective	AR2	0.773	0.852/		MA1	0.852	0.703/
Reputation	AR3	0.935	0.923/	Reciprocity	MA2	0.862	0.859/
(AR)	AR4	0.904	0.943	(REC)	MA3	0.839	
	AR5	0.858			MA4	0.798	0.904
Desponsive	RES1	0.916	0.826/	Utilitarian	FV1	0.877	0.764/
Responsive-	RES2	0.918	0.826/		FV2	0.888	
ness	RES3	0.902	0.929/	Value	FV3	0.848	0.897/
(RES)	RES4	0.897	0.95	(UV)	FV4	0.882	0.928

Table 2: Reliability and Convergent Validity

Constructs	PER	REC	UV	RES	HV	AR	PC	SOC	CR
PER	0.891								
REC	0.597	0.839							
UV	0.600	0.581	0.874						
RES	0.680	0.601	0.679	0.909					
HV	0.578	0.595	0.749	0.677	0.923				
AR	0.535	0.538	0.592	0.646	0.636	0.877			
PC	0.589	0.600	0.758	0.661	0.634	0.628	0.827		
SOC	0.729	0.666	0.473	0.590	0.535	0.401	0.500	0.903	
CR	0.479	0.494	0.583	0.513	0.627	0.685	0.543	0.336	0.837

Table 3: Factor Correlation Coefficients and Square Roots of the AVEs

Notes: Diagonal elements are the square roots of the AVEs. These values should exceed the inter-construct correlations for adequate discriminant validity. PER=personalization; REC=reciprocity; UV=utilitarian value; RES=responsiveness; HV=hedonic value; AR=affective reputation; PC=perceived control; SOC=sociability; CR=cognitive reputation.

#### 5.2. Test of the Structural Model

SmartPLS was used to analyze the structural model and test the proposed main effect hypotheses. In SmartPLS, the coefficient of determination  $R^2$  is an indicator of model predicting power ( $R^2$ >0.25 for weak,  $R^2$ >0.50 for moderate and  $R^2$ >0.75 for the substantial explanatory power of the model). Path effect  $f^2$  assesses how the removal of a predictor construct affects the endogenous construct's  $R^2$  value and  $f^2$  value higher than 0.02, 0.15, 0.35 indicates small, medium, and large  $f^2$  effect size [Wong 2013; Hair et al. 2019].  $f^2$  value should only be reported when it differs from the *p*-value, which implies partial or full mediation [Nitzl et al. 2016].

As shown in Table 4, the determination coefficients  $R^2$  of endogenous variables utilitarian value, hedonic value, cognitive reputation, affective reputation were all above 0.50 except cognitive reputation which was a little below 0.50 (0.426), showing the intermediate explanatory ability of the proposed model. Nine out of the 14 path coefficients were significant indicating significant impacts of the independent variables. As shown in Table 4, hypotheses H1a, H1b, H4b, and H6b were rejected and H4a received a negative result. The other hypotheses were supported.

Six out of the fourteen path effect  $f^2$ s were less than or equal to 0.02 and the rest of the path effect  $f^2$ s were between 0.02 and 0.35, which indicate that not all characteristics of business-to-consumer interaction and consumer-toconsumer interaction have a significant influence on utilitarian value, hedonic value, cognitive reputation, and affective reputation. The nonsignificant paths are between utilitarian value and cognitive reputation, utilitarian value and affective reputation, sociality and hedonic value, and personalization and hedonic value. However, there were discrepancies between the *p*-value and  $f^2$  value for H4a. The coefficient was negative but significant (p = 0.003) and the  $f^2$  value indicated significant effect ( $f^2 = 0.014$ ). Table 4 also showed that there were discrepancies between the *p*value and  $f^2$  value for two other paths: SOC and CR, SOC and AR. Therefore, according to Nitzl et al. [2016], it is necessary to explore the possible mediation effects among all of the constructs in this model.

	Path	Coefficient	p values	Result	$f^2$	Endogenous Variable	$R^2$
H1a	UV -> CR	0.113	0.311	NS	0.005	UV	0.550
H1b	$UV \rightarrow AR$	-0.024	0.752	NS	0.000	HV	0.647
H2a	HV -> CR	0.335**	0.002	Supported	0.076	CR	0.426
H2b	$HV \rightarrow AR$	0.258**	0.001	Supported	0.052	AR	0.535
H3a	REC -> UV	0.115**	0.008	Supported	0.020		
H3b	REC -> HV	0.191**	0.002	Supported	0.038		
H4a	SOC -> UV	-0.101**	0.003	Supported	0.014		
H4b	SOC -> HV	0.013	0.783	NS	0.000		
H5a	RES -> UV	0.246***	0.000	Supported	0.070		
H5b	RES -> HV	0.338***	0.000	Supported	0.108		
Нба	PER -> UV	0.132**	0.007	Supported	0.022		
H6b	PER -> HV	0.085	0.150	NS	0.007		
H7a	PC -> UV	0.502***	0.000	Supported	0.347		
H7b	PC -> HV	0.238 ***	0.000	Supported	0.061		
	$PC \rightarrow CR$	0.071	0.247	NS	0.003		
	$PC \rightarrow AR$	0.239***	0.000	Significant	0.044		
	PER -> CR	0.022	0.688	NS	0.000		
	PER -> AR	0.007	0.892	NS	0.000		
	REC -> CR	0.076	0.324	NS	0.003		
	REC -> AR	0.051	0.362	NS	0.002		
	RES -> CR	0.025	0.676	NS	0.000		
	RES -> AR	0.241**	0.002	Significant	0.045		
	SOC -> CR	0.136	0.012	NS	0.016		
	SOC -> AR	0.095	0.025	NS	0.009		

Table 4: Model Fitness Index and Path Coefficient

Note: \*p<0.01, \*\* p<0.05, \*\*\* p<0.001.

# 5.3. Test of Mediating Effects

Mediation exists if the coefficient of the direct path between the independent variable and the dependent variable is reduced when the indirect path via the mediator is introduced into the model [Kuo & Feng 2013]. Following the methods recommended by Hair et al. [2019], the direct and the specific indirect effects from the results of the SmartPLS PLS-SEM algorithm and the bootstrap procedure were used to analyze the mediating effects. First, we calculated the total effect via the addition of indirect effect and direct effect; then the indirect effect was divided by the total effect to get the variance accounted for (VAF). VAF values greater than 80% indicate full mediation, VAF values between 20% and 80% show partial mediation, and VAF values less than 20% mean no mediation. According to Table 4, the path coefficients from utilitarian value to both cognitive reputation and affective reputation were insignificant and only the hedonic value showed significant influences over the two reputation dimensions. Therefore, 10 paths were examined for mediating effects.

The results of the mediation analysis found two full mediation effects and four partial mediation effects of the perceived hedonic value (Table 5), partially supporting H8b but rejecting H8a. Hedonic value had a full mediation effect over two links: perceived control and cognitive reputation (VAF=83%) and responsiveness and cognitive reputation (VAF=82%). Hedonic value also served as a partial mediator for four links: perceived control and affective reputation (VAF=20.60%), responsiveness and affective reputation (VAF=26.74%), reciprocity and affective reputation (VAF=50%), and reciprocity and cognitive reputation (VAF=45%).

Mediation Path	Indirect Effect	<i>p</i> -value	Direct Effect	Total Effect	VAF
PC -> HV -> AR	0.062*	0.017	0.239***	0.301	20.60%
PER -> HV -> AR	0.022	0.193	0.007		
REC -> HV -> AR	0.048**	0.008	0.051	0.096	50%
$RES \rightarrow HV \rightarrow AR$	0.088**	0.009	0.241*	0.329	26.74%
SOC -> HV -> AR	0.003	0.789	0.095**		
PC -> UV -> AR	-0.011	0.751	0.239***		
PER -> UV -> AR	-0.003	0.766	0.007		
REC -> UV -> AR	-0.003	0.769	0.051		
$RES \rightarrow UV \rightarrow AR$	-0.006	0.763	0.241*		
SOC -> UV -> AR	0.002	0.763	0.095**		
PC -> HV -> CR	0.08*	0.016	0.071	0.096	83%
$PER \rightarrow HV \rightarrow CR$	0.028	0.177	0.022		
REC -> HV -> CR	0.062**	0.007	0.076	0.138	45%
$RES \rightarrow HV \rightarrow CR$	0.116*	0.017	0.025	0.141	82%
$SOC \rightarrow HV \rightarrow CR$	0.004	0.781	0.136*		
PC -> UV -> CR	0.057	0.329	0.071		
PER -> UV -> CR	0.015	0.354	0.022		
REC -> UV -> CR	0.012	0.360	0.076		
RES -> UV -> CR	0.028	0.346	0.025		
SOC -> UV -> CR	-0.012	0.378	0.136*		

Table 5: Mediation Effect

Note: \**p*<0.01, \*\* *p*<0.05, \*\*\* *p*<0.001.

# 6. Discussions and Implications

# 6.1. Discussion of Findings

The objectives of this study are to understand the impact of social media interaction features on e-commerce reputation through customer interaction experiences and the mediating effect of customer perceived values in those relationships. The results of our study reveal interesting findings.

First, customer perceived hedonic value has a significant and positive influence on both e-commerce cognitive and affective reputations, and customer perceived utilitarian value does not have a significant influence on ecommerce reputations. A possible explanation for this result is that the utilitarian value is more closely related to functional values such as information quality and content relevance. Those information is mainly shown on company websites and has a relatively objective existence compared to consumer experience and subjective evaluation of interactions over social media channels. On social media channels, consumers may pay more attention to hedonic value (interpersonal value like a feeling of comfort within a supportive community and peer identification) they perceived during different interactions to evaluate e-commerce reputations.

Second, among the five interaction features identified, only reciprocity, responsiveness and perceived control demonstrate positive and significant influence on both consumer perceived hedonic value and utilitarian value. Extant literature in business-to-business (B2B) environment [Hansen et al. 2008] and social websites [Hajli 2014] shows that the positive impact of consumer information support is limited to the utilitarian dimension of consumer perceived value. In social media channels, reciprocity, responsiveness, and perceived control not only relate to what information is communicated but also what it is associated with, by whom, and how the information is delivered [Lee & Park, 2013; Yacouel & Fleischer 2012]. Prevalent social network studies already indicate that factors such as likelihood of getting responses [Lee & Park 2013], timeliness of responses and communication style [Floreddu et al. 2014], and handling of negative posts [Eberle et al. 2013] are more closely related to consumer perceived hedonic value. It is not surprising to find that our results indicate positive and significant impact of responsiveness, reciprocity, and perceived control on both utilitarian and hedonic values. The personalization feature only has a significant and positive impact on perceived utilitarian value. Personalization in social media mostly relates to information or targeted promotion delivered to consumers, matching their purchase history or browsing interest. Therefore, it is more closely associated with utilitarian value than hedonic value. The findings on the relationship between sociality and perceived values are not in line with our hypotheses. Sociality has no significant influence on perceived hedonic value and it shows a significant but negative influence on perceived utilitarian value. An explanation for this result could be that when functional value such as information inquiry is the main purpose of a consumer's interaction in social media channels, the consumers are more goal-oriented and time-sensitive and thus pay minimum attention to hedonic value. The social

interaction with other people could distract them and/or reduce the time they can use for the actual information search. In this situation, the more social interaction consumers have with other people, the more unlikely they are to conduct effective information search, reducing their perceived utilitarian value.

Finally, perceived hedonic value mediates the influence of perceived control, reciprocity, and responsiveness on e-commerce cognitive and affective reputations, but perceived utilitarian value does not mediate the relationship between any interaction features and e-commerce online reputation. Full mediation of perceived hedonic value is found in two links: perceived control-cognitive reputation and responsiveness-cognitive reputation. Partial mediation of perceived hedonic value demonstrates in four different links: perceived control-affective reputation, responsiveness-affective reputation, reciprocity-affective reputation, and reciprocity-cognitive reputation. There is no mediation effect from perceived hedonic value on the links between sociality and reputation or personalization and reputation. These results have several implications: 1) Perceived utilitarian value of social media interaction has a very limited influence on e-commerce online reputation because social media channels are not the major venue for objective information posting. In the same vein, personalization is usually related to information sharing over social media and perceived hedonic value exerts no mediation impact over its relationship with e-commerce reputation; 2) When perceived hedonic value is absent, the impact of perceived control and responsiveness on cognitive reputation will not exist; 3) Sociality in social media interactions can have direct and significant impact on affective and cognitive reputation; 4) The four impacts (perceived control on affective reputation, responsiveness on affective reputation, reciprocity on affective reputation, and reciprocity on cognitive reputation) come from direct influence of specific interaction features and the mediating effect of perceived hedonic value.

# 6.2. Theoretical Implications

This study also offers several significant theoretical implications. First, the current research introduces perceived hedonic value and utilitarian value to understand the influencers of e-commerce online reputation through customer interaction experience: 1) Perceived utilitarian and hedonic values have been used to study social media stickiness [Zhang et al. 2017] and participation [Jahn & Kunz 2012; Yu et al. 2013] but to our knowledge, it is used for the first time in e-commerce online reputation research; 2) In addition to the direct relationship between perceived value and e-commerce online reputation features towards e-commerce online reputations; 3) Different from prior studies focusing solely on the positive influence of utilitarian value on the overall retailer reputation [Caruana & Ewing 2010] or online loyalty [Yoon et al. 2014], our study shows that in social media settings, only perceived hedonic value has a positive influence on e-commerce online reputation. Therefore, our study extends the application of consumer perceived value to e-commerce online reputation research and provides a novice understanding of the complex interrelationship among interaction features, perceived value, and e-commerce online reputation.

Second, unlike previous studies that consider interaction as a single construct in social network research models [e.g. Zhang et al. 2017; Zhang 2014], our study taps into the five individual features of the interaction and differentiates their individual impact on e-commerce enterprise reputation through the mediation of consumer perceived value. In addition to interaction features mentioned in extant studies (perceived interactivity, perceived personalization, perceived sociability) [Zhang et al. 2017; Jiang, Chan & Tan 2011], we add two business-consumer interaction features (responsiveness and perceived control) and group the features into business-to-consumer and consumer-to-consumer interactions in our research model. We consider the inclusion of business-to-consumer interaction very important because social media interaction is a value co-creation process involving both businesses and customers [Zhang et al. 2017]. The results of our study demonstrate that individual interaction attributes have different direct influences on e-commerce online reputation. With the mediation of consumer perceived hedonic value, their indirect effects on e-commerce reputation are also different. The current study thus sheds new light on e-commerce and social media research by capturing the intricate dynamics of interaction features and their individual impact on e-commerce reputation through perceived values.

Third, extant marketing and management studies on corporate reputation have been criticized for emphasizing only the competence dimensions or cognitive reputation (perceived quality, market prominence, or financial performance) and neglecting the socially-oriented facets of reputational assessment [Agarwal et al. 2018]. Our study fills this gap by first introducing both cognitive reputation and affective reputation in understanding the impact of social media interactions on e-commerce online reputation through customer experience. The results of our study add new understandings of customer implicit attitude towards e-commerce businesses through social media interaction experience.

Finally, unlike previous studies that focus either on the relationships between perceived value and online reputation [e.g. van Noort & Willemsen 2012; Dijkmans et al. 2015] or the relationship between online interaction and consumer perceived value [Aula 2011; Lee & Park 2013], our study incorporates interaction features, consumer perceived values, and e-commerce online reputations into a holistic model to investigate the relationships among the

component constructs. We offer a fine-grained perspective of the interplay among systems, users, and behaviors, providing theoretical groundwork and guidance for future interdisciplinary and multi-perspective research.

#### 6.3. Managerial Implications

The results of our study offer guidelines for e-commerce enterprises to better manage their online reputation and social media channel operations. First, social media networks can facilitate business-to-consumer and consumer-to-consumer interactions to enhance the consumer social interaction experience. The building of social media channels to attract visitors and promote business reputation is just the first step of the customer value delivery process. When selecting or designing social media platforms, enterprises should pay special attention to features such as perceived control, responsiveness, and reciprocity because these features can have a direct impact on consumer social media interaction experience. In addition to the technical experts, the social media team should include employees well-trained in areas such as artistic design, psychology, language arts, and communication so that they can be more sensitive to consumer social interaction need and concerns when they design social media promotions, launch marketing campaigns, and deliver comments and messages over social media channels. Studies show that social media communication style [Floreddu et al. 2014] and timely responses need to match the characteristics of the industry. Sometimes informal communication can become an effective way to improve business reputation [Yacouel & Fleischer 2012]. By offering different levels of privacy settings and periodically updating user privacy policies, users can acknowledge the boundaries and be more at ease and confident when interacting and sharing with the company and other consumers [Hajli & Lin 2016].

Second, e-commerce companies should pay specific attention to the co-creation of customer values, especially hedonic values, during interactions. Perceived hedonic value has a direct impact on e-commerce reputation and can influence the impact of different social media features on e-commerce reputation. E-commerce companies could encourage consumers to engage in different social media communities to facilitate reciprocity and sociability in consumer-to-consumer interactions. To keep the social media communities active and sticky [Zhang et al. 2017], companies could use celebrities or opinion leaders to introduce new product ideas, conduct discussions on popular issues, and publicize corporate social responsibility efforts [Saeidi et al. 2015], to attract more followers and strengthen consumer identification with specific social media communities. Consumers' satisfactory experience during social media interactions can induce enjoyment and loyalty [Cyr et al. 2009], boost reliance and trust in interpersonal relationships, and lead to higher message credibility and a stronger feeling of identification with the company [Eberle, et al. 2013]. All of these positive attitudes towards the company will ultimately result in better corporate reputation.

Third, e-commerce companies should be very careful when handling adverse messages and negative consequences of social network communities like trash-talking rival brand members and other such malice and open hostility towards competing brands. Sociality exerts a significant direct impact on both e-commerce cognitive and affective reputation. If not dealt with properly, with the rapid influence of social media, negative publicity could manifest as reputation risk [Gatzert et al. 2016] and pose damage to e-commerce online reputation. The public sharing of negative eWOM through C2C social media interaction can induce higher level of adversity than if it is obtained through B2C communication using nonsocial networking means [Adjei et al. 2016]. It is suggested that companies should work with/through social media rather than circumventing negative social media publicity by hiring third-party media to provide a valuable endorsement [Carrol 2013]. In addition, perceived firm responsiveness mitigates the negative impact of negative social network publicity on both negative word-of-mouth and patronage reduction [Adjei et al. 2016]. Therefore, social media managers should regularly monitor social media communities for any potential causes of concerns in the B2C and C2C interactions and respond to customer concerns.

Finally, the results of our study indicate that consumer social media interaction features leading to consumer perceived hedonic values matter more in developing affective reputation than that of cognitive reputation, and the management of the two reputation dimensions may require different strategies. Managers may also need to prioritize different strategies and pick the most appropriate one for certain marketing promotions. In a recent review of factors influencing corporate reputation, Gatzert [2015] identifies some factors closely related to e-commerce online reputation management (e.g. social responsibility, environmental responsibility, advertising intensity and diversification, sympathy, corporate culture and identity, level of control over social media content). Personalized information sharing and product promotion over social media should be used cautiously because they do not contribute to the development of e-commerce online cognitive or affection reputation. When dealing with consumer concerns and issues, especially negative visibility, through social media interactions, companies should pay attention to the style and timeliness of communication and demonstrate sympathy for any negative impact or consequences. Meanwhile, companies should try to balance social media scrutiny and consumer perceived control to ensure that consumers can still enjoy their social media interactions for information sharing, relationship building and psychological support in a relaxed and pleasant atmosphere. Moreover, the publicity of corporate social responsibility

and environmental responsibility events in relevant social media communities can promote affective reputation and attract new and potential customers.

## 7. Conclusion

Based on consumer value theory, our study examines how consumers' perceived value gained from social media interactions with e-commerce businesses and other consumers influences their evaluation of e-commerce online reputation. The results of our study indicate that consumer social media interaction features leading to consumer perceived hedonic values matter more in developing affective reputation than in developing cognitive reputation. The results also show that consumers' perceived hedonic value has significant positive influence on the cognitive and affective reputation of e-commerce enterprises. Reciprocity, perceived control, and responsiveness have significant positive influence on both perceived utilitarian and hedonic value. Sociability exerts direct significant influence on e-commerce affective and cognitive reputation. Personalization only has positive and significant influence on consumers' perceived utilitarian value. Consumers' perceived hedonic value shows full and partial mediating effect over the impact of perceived control, reciprocity, and responsiveness on e-commerce cognitive and affective reputation.

### 8. Limitations and Future Directions

As with any study, there are several limitations. First, we explore the impact of five interaction features on ecommerce enterprise reputation through consumers' perceived value. Future studies could include additional and more independent interaction features such as enjoyment, perceived ethnicity, and efficiency as suggested by select social networking studies [Cyr et al. 2009; Hajli & Lin 2016]. Second, the social media channels setting in the current study were from business-to-consumer e-commerce in China. Future research can verify our research model in consumerto-consumer e-commerce settings from different countries and compare the influences of interactive experiences on the reputation of individual sellers and corporate venders with different cultural values in different settings [Zhou et al. 2015]. Another limitation of the study is the cross-sectional nature of the data. Customer social media interactions and the associated experiences are longitudinal in nature. Customer value can change across customer segments and over time [Woodruff 1997], requiring changes in customer value creation and reputation management. Future studies on the impact of consumer interaction experience over e-commerce online reputation should take a longitudinal approach to investigate whether the ultimate impact of social media interaction experience varies over time. Another direction for future research is to investigate the possible influence from the goal/object level (reputation) backward to the attribute level of customer value. Finally, the industry used in the present study may have some inherent impact on the results. Future studies could use samples from different industries to test our research model and validate external validity of the results.

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Construct	Index	Definition	Source			
	CR1	The firm is a top competitor in its market.				
Cognitive Reputation (CR)	CR2	As far as I know, it is recognized worldwide.				
	CR3					
	CR4	5				
	CR5	The firm is well-known.				
	CR6	The firm shows promising financial performance.				
	AR1	It is a company I can identify with better than with other companies.				
Affective Reputation	AR2	It is a company I would regret more if it didn't exist any more than I would with other companies	Schwaiger			
(AR)	AR3	I regard it as a likable company.	[2004]			
	AR4	I have positive emotions towards the company.				
	AR5	I care about its long-term development.				
	REC1	Can get many useful suggestions				
Reciprocity	REC2	Share knowledge and experiences with each other	Chan & Li			
(REC)	REC3	Gain the help from the professional	[2010]			
(ILC)	REC4	Is encouraged to post comments	[2010]			
	SOC1	Is impressed by the other members in social media channels				
Sociability	SOC1	· ·				
(SOC)	SOC2	Feel I'm part of this company's social media channels	Animesh et.a			
(500)	SOC3	Can make close friends with other members	[2011]			
	PER1	The company can understand my needs.				
	PER2	The company can meet my individual needs.				
Personalization		The company provides me recommendations based on my	Tam & Ho [2005]			
(PER)	PER3	individual needs.				
	PER4	The company provides customized service and information based on my preference.				
	RES1	My request can be responded to and dealt with quickly.				
Responsiveness	RES2	The reply given by the company is what I want.	Liu [2003]			
(RES)	RES3	I can quickly get the information I want.	Liu [2003]			
	RES4	My questions can be answered in a better way.				
	PC1	I am clear about what I want to browse.				
	PC2	I can subscribe or unsubscribe to the information freely.	Sana P			
Perceived Control (PC)	PC3	I can decide to start or end the interaction with the company autonomously.	Song & Zinkahan			
	PC4	The company can guarantee the safety of my reference and trade information.	[2008]			
Perceived Utilitarian Value (UV)	UV1	I can buy what I need from the company.				
	UV2	I can buy products that meet my expectation				
	UV3	The product I bought from the company is worth the money I paid.				
	UV4 The purchase experiences from the interaction with the comparare helpful for me.		Chang & Tseng [2014			
	HV1	The purchase experiences make me happy.	-			
Perceived Hedonic	HV1 HV2	The purchase experiences make me relax.				
Value (HV)	HV2 HV3	The purchase experiences bring me pleasure.				
		es anchored at 1 (strongly disagree) to 7 (strongly agree).				

# **Appendix 1: Measurement Items of Constructs**

All items user 7-point Likert scales anchored at 1 (strongly disagree) to 7 (strongly agree).