

What Drives Social Commerce: The Role of Social Support and Relationship Quality

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ABSTRACT: Social commerce is emerging as an important platform in e-commerce, primarily due to the increased popularity of social networking sites such as Facebook, LinkedIn, and Twitter. To understand the user's social sharing and social shopping intention in social networking Web sites, we conducted an empirical study on a popular microblog to investigate how social factors such as social support and relationship quality affect the user's intention of future participation in social commerce. The results indicate that both factors play a critical role. Social support and Web site quality positively influence the user's intention to use social commerce and to continue using a social networking site. These effects are found to be mediated by the quality of the relationship between the user and the social networking Web site. Our findings not only help researchers interpret why social commerce has become popular, but also assist practitioners in developing better social commerce strategy.

KEY WORDS AND PHRASES: Participation continuance, relationship quality, social commerce, social support, Web site quality.

The increased popularity of social media such as Facebook and Twitter has created a new delivery platform in e-commerce called social commerce. Its major feature is conducting various types of commercial activities on social media to take advantage of online social capital. Users of social media are encouraged to share product information with their friends or sell products or services via social media. Consumers may also consult their social community to seek advice in their purchasing decisions. To achieve such purposes, these Web sites often provide functions for their users to easily share commercial information within their social networks. Facebook's "Like" button, Twitter's "Tweet" button, and Plurk's "Share" button are samples of this feature.

Social sharing is different from traditional customer reviews in that it focuses on sharing information with friends on social networking sites, whereas traditional customer reviews are shared with unknown online shoppers. According to a social commerce survey [31], 83 percent of online shoppers are willing to share shopping information with their friends, and 67 percent of online shoppers are likely to purchase more based on the recommendations they get from their community. Because the shopping information received from friends is viewed as more valuable, it may influence online purchasing and play a key role in social commerce [47]. Therefore, it is important to understand the factors that affect the willingness of social media users to

This research was funded in part by the grant of Universities Pursuing Research Excellence to National Sun Yat-Sen University from the Ministry of Education of Taiwan and a grant from the National Science Foundation of Taiwan under contract number NSC 99-2410-H-110-035-MY3.

share and receive commercial information. Such understanding also helps us to understand why social commerce is popular, and it can help businesses develop and improve their social media marketing strategy.

Existing online shopping research examines how Web site design and content can affect the success of e-commerce [1, 14]. For example, Ahn et al. [1] studied the effect of Web site quality and playfulness on user acceptance of online retailing. Liang and Lai [29] investigated Web site design features that affect online purchase intention and classified them into motivators and hygiene factors. DeLone and McLean [14] proposed an e-commerce success model by measuring the Web site design, content, and service quality. These previous studies in online shopping have provided much insight, but they have major limitations when applied to social commerce because the social relationship constructs, a key dimension in social commerce, are not included in their models. Therefore, it is important to include the social relationship aspect in investigating social commerce behavior.

The purpose of this study is to propose a relationship perspective in social commerce. Relationship is known to have significant effects on human behavior in marketing and in social psychology literatures. It is particularly important in social commerce because relationship is an essential foundation on which social commerce is built. More specifically, this research examines the role of social support on relationship quality and its effects on intention to adopt commercial activities in social media. Social support is a concept in sociology that measures how individuals feel about being cared for, being responded to, and being helped by people in their social groups [9, 21]. Human beings need social interactions to satisfy their social needs for belonging and support [32]. A direct outcome of social support is enhanced *relationship quality*, an important construct in relationship marketing, which is known to lead to higher customer loyalty. In other words, better social support can lead to better relationship quality, which in turn can result in higher customer loyalty. Therefore, the inclusion of social support and relationship quality in social commerce research can result in unique contributions to our understanding of users' commercial behavior in social networking Web sites.

In line with the above understanding, this research intends to answer the following three questions: (1) Does the perceived social support in a social networking site affect the user's intention to continue to use the Web site and to conduct social commerce there? (2) Which factors (social or Web site design factors) are more important in determining the user's intention to continue to use and to conduct social commerce? (3) Does relationship quality between the user and the Web site mediate the effects of social support and Web site quality on customer loyalty?

To answer these questions, a theoretical model that combines social and Web site quality factors has been proposed and an empirical study has been conducted on plurk.com, a popular microblog Web site that supports more than 20 different languages, to test the model. Our results indicate that (1) the effect of social support is significant, (2) social support has a stronger effect on both continuance use intention and social commerce intention than Web site quality, and (3) the relationship quality does mediate the effects of social support and Web site quality on customer loyalty and social commerce intention. These

findings show that social support and relationship quality are two important concepts that should be included in future research in social commerce.

The remainder of this paper is organized as follows. The next section reviews prior literature on social support, Web site quality, and relationship quality. This is followed by the research model and hypotheses in the third section. Development of the research instrument and the process of the empirical study are provided in the fourth section. The fifth section reports findings from data analysis, and the sixth concludes the paper and presents the limitations and future research directions.

Literature Review and Theoretical Development

Social relationship is the key element that differentiates social commerce from other forms of online commercial activities. Traditionally, the study of the social element has focused on social influence (e.g., [48]), that is, how other people's attitudes or opinions may affect an individual's decision making. Social norm is a popular construct to measure social influence and is a key element in theories such as *the reasoned action* theory and *the planned behavior* theory. Another important but underinvestigated social element in e-commerce is social support, which shows the extent to which peers of an individual care about the individual's welfare. Previous literature in social psychology has indicated that social support has effects on enhancing relationship quality and reducing stress [9, 10, 21, 30, 44]. Hence, it plays an important role in relationship building and is considered an important construct in studying commercial behavior in an online community. Following is an overview of social support theory and its role in social commerce.

Social Support in Online Communities

There was a time when the Internet was viewed by many as a communication tool to avoid contacting people face to face. Several studies argued that the longer time one spent on the Internet, the poorer the person's interpersonal relationships would be [25, 41]. With the popularity of social media, however, the role of the Internet has changed to become an important channel for facilitating social interaction. Recent research has found that online communities can bring social values to their users and that the Internet is a powerful vehicle for an individual to build close relationships with others and to enhance the individual's well-being [15, 36, 44, 50]. Social support has been found to be a major social value that Internet users can obtain from an online community [22, 36, 44].

Social support refers to an individual's experiences of being cared for, being responded to, and being helped by people in that individual's social group [9, 21]. Since social support could bring in warmth and understanding to an individual, it can also be treated as the responsiveness to satisfy one's psychological needs [32]. Such support, as a kind of enthusiastic feedback, can help a person feel better even if the support does not provide direct assistance

to solve the person's problem. Receiving support brings warmth to people's heart. Such good experiences satisfy people in their social interactions with their supporters and help fulfill their social needs. Therefore, in a community with good social support, people are usually willing to interact with others for mutual help [26].

Social support is a multidimensional construct whose components could differ from context to context [22, 30, 50]. House [21] argued that there are four types of social support that could reduce work stress, including emotional, instrumental, informational, and appraisal support. Schaefer et al. [42] indicated that people need emotional and informational support (which are intangible) as well as tangible support when they are under health stress. Since interactions on the Internet are virtual in nature and are often relied-on messages, online social support that may help social media users usually is intangible in nature, including informational support and emotional support [10, 22, 30]. *Informational support* refers to providing messages, in the form of recommendations, advice, or knowledge, that could be helpful for solving problems. *Emotional support* refers to providing messages that involve emotional concerns such as caring, understanding, or empathy [21, 45]. These two types of messages are the major support mechanisms for social interactions in online communities. In the virtual environment, informational support could provide solutions, plans, or interpretation. Emotional support focuses on expressing one's concerns and hence can help to solve problems indirectly. These two types of support are the main target for investigating social support in virtual communities.

The role of social support in social commerce can be theorized as follows. When social support exists in a social network, it would be natural for community members to share commercial information and recommendations as an extension of their sharing of other supportive information. When a user perceives that other members have been caring and helpful in providing useful information, then acquiring or sharing valuable shopping information with others would be obligatory [11]. The frequent sharing of supportive information can also enhance friendship and trust among members, which may further increase the intention to conduct commercial activities. We can hence derive a linkage between social support and the intention to conduct social commerce.

The Influence of Web Site Quality

E-commerce is usually conducted on a Web site, and studies have shown the importance of Web site quality in e-commerce (e.g., [1, 14, 21, 29]). A social networking site is an online platform for offering social network services whose success depends on the quality of the Web site. In other words, Web site quality is an important factor in investigating the usage behavior or success of a social networking Web site. Social commerce involves using a social networking site for commercial activities. Design factors of social networking sites are expected to have significant influence on their users' social sharing and social shopping behavior [14].

Previous research on the effect of Web site quality has adopted two different approaches: one focuses on specific functions provided by the Web site and their effects on e-commerce, and the other focuses on user perception of Web site design quality. Liang and Lai's study [29] is an example of the functional view of Web site quality. In their research, the design functions of an online retailer were summarized and categorized into motivators, hygiene factors, and media richness factors. The effects of these factors on the intention to purchase, intention for future visits, and actual purchases were examined.

An example of the other line of research, focusing on user perception of Web site design quality, is a study by DeLone and McLean [14] that applies an information system success model to measure e-commerce success by using system quality, information quality, service quality, user satisfaction, system use, and net benefits. System quality, information quality, and service quality are three direct measures of Web site quality. *System quality* refers to the degree to which a Web site possesses desired capabilities such as availability, reliability, and response time. *Information quality* indicates the degree to which the content of the Web site is timely, accurate, and complete. Finally, *service quality* refers to the degree to which a user evaluates supports and services delivered by the service provider via the Web site. These three measures of quality have been widely used in research assessing Web site quality (e.g., [1, 8, 28, 46]).

In this research, we adopt the view that uses system, information, and service qualities to measure Web site quality. Because the information available on social networking sites is mostly generated by the user (referred to as user-generated content). Unlike system quality and service quality, which are the responsibility of the Web site operators, information quality relies on member contributions and the climate of the social network, which overlaps with social support, which has been identified as a separate construct. Therefore, we opted to measure Web site quality only by system quality and service quality. The information quality measure is replaced by the social support construct.

Social Commerce Intention and Loyalty

Intention is a common measurement for behavioral researchers to predict possible human actions. A large body of research has proven that behavioral intention has a significant correlation with actual behavior. A major purpose of social commerce is to take advantage of relationships in a social network to gain commercial benefits. In general, the commercial benefits may be measured by increased transactions (sharing of commercial information or sales of product/service) or higher customer loyalty. As accurate financial data from actual transactions may not be easy to obtain, it is quite common to measure the intention to behave in a certain way as a surrogate of the actual behavior because intention is proven to be a valid predictor of the actual behavior. Well-known theories such as *the reasoned action theory*, *the technology acceptance model* and *the planned behavior theory* use intention as a surrogate for the eventual user behavior. Therefore, we also use intention to conduct social commerce as our outcome variable to see how well social support and Web site quality may affect user intention to conduct social commerce.

Another important outcome in e-commerce is customer loyalty to a Web site, which shows a consumer's intention to maintain a long-term relationship with the Web site by continually using it. In fact, the whole area of relationship marketing is built upon the belief that maintaining a long-term relationship with the customer is beneficial to the seller. Therefore, customer loyalty is a common measure of marketing effectiveness (e.g., [39]). Customer loyalty is usually measured by the intention to visit again and the intention to purchase again. When this is adapted to social commerce, we can measure customer loyalty to a social networking Web site by the intention of a user to continue using the Web site (continuance use) (e.g., [2, 3, 8]). Hence, the continuance intention shows whether a user is loyal to a social networking Web site, and the social commerce intention measures whether a user is interested in conducting commercial activities on the Web site.

Relationship Quality

An important concept in relationship marketing is relationship quality, also referred to as relationship closeness or relationship strength, which plays a key role in affecting customer loyalty [20, 37]. Crosby et al. [12] indicated that relationship quality provides an evaluation of the strength of a relationship between a service provider and a customer. That is, relationship quality refers to a user's total evaluation of a service provider. Relationship quality is different from Web site quality in that the former focuses on one's belief or attitude toward a service provider, whereas the latter focuses on one's belief or attitude toward the delivery mechanism. Web site quality can affect the relationship between a user and the Web site, but not vice versa.

Previous literature has shown that relationship quality has long-term influence on a user's continuance intention with a service provider [18, 37, 43]. The strength of the tie resulting from the quality of a service provider's offering will affect a user's decision and the success of the service provider [12, 40, 43]. Influencing the strength of this tie, the service design or Web site design of a social networking Web site will create specific user impressions of the relationship with the Web site, which will then affect the user's intention to continue using the Web site. More specifically, when a user feels that a relationship with a social network is good, the user is more willing to share valuable commercial information or recommend products online or seek commercial opportunities from online friends. Hence, the role of relationship quality in social commerce cannot be ignored.

Relationship quality usually is defined as a multidimensional construct. Prior studies have identified three major components in relationship quality: trust, commitment, and satisfaction [17, 37]. Trust refers to the belief that the service provider is honest and benevolent [18, 33]. Commitment indicates a psychological state that occurs when an ongoing relationship with a service provider is so important that maximum efforts are guaranteed in order to maintain it [18, 33]. Satisfaction refers to an emotional state that is evoked by the overall evaluation of interactive experiences with the service provider [12, 18]. These three components could represent a user's overall attitude toward a social networking service provider. In fact, there are many studies that

investigate individual effects of these three components. For example, Chen et al. [6] found that mutual trust plays a key role in consumer-to-consumer Web site “stickiness” and Teo et al. [46] investigated the relationship between trust and e-government success. Commitment and satisfaction have also been examined by many [8, 17, 18, 33]. Hence, it is fair to posit that relationship quality will play a significant role in social commerce intention and continuance intention with a social networking site.

The Research Model and the Hypotheses

In the previous section, we identified five major constructs that are related to the relationship perspective of social commerce: social support, Web site quality, social commerce intention, continuance intention (loyalty), and relationship quality. Based on the relationship marketing paradigm, social support and Web site quality are enablers that enhance relationship quality, which in turn affects intention to conduct social commerce and the continuance intention. For the purpose of comparison, we also would like to examine the direct and indirect effects of social support and Web site quality. Our research model is shown in Figure 1. The corresponding hypotheses are listed and justified below.

Direct Effects of Social Support

Social exchange theory argues that an individual would reciprocate others’ support when the individual obtains benefits from the others [5]. In the context of online community, a social networking site is a platform for users to exchange support with one another. If a user receives support from friends in a social networking site, the user may be feel obligated to return a similar favor [7, 11]. The reciprocating motivation resulting from the perception of social support encourages users to share shopping information, product knowledge, or purchasing experiences with their friends, and to find or receive such information in a social networking site. This leads to stronger social commerce intention and stronger intention to continue using the Web site. Therefore, the following hypothesis can be posited:

***Hypothesis 1a:** The perception of social support in a social networking site is positively associated with the user’s social commerce intention.*

***Hypothesis 1b:** The perception of social support in a social networking site is positively associated with the user’s continuance usage intention.*

Direct Effects of Web Site Quality

The quality of a social networking site is determined by both system functions and service. A good system quality allows users to use a Web site to solve their problems. A good service quality can help users gain the full power of the Web site satisfactorily by matching their expectations [13, 38]. Good quality of a

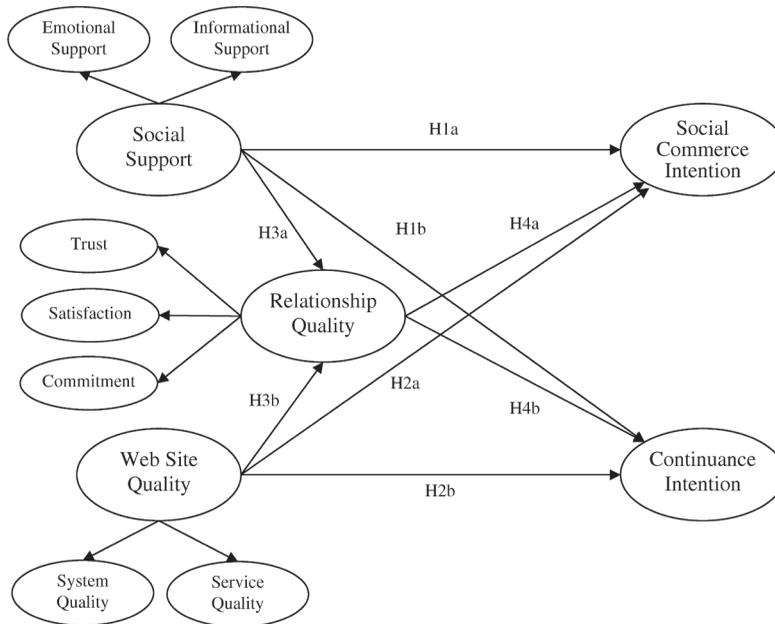


Figure 1. The Research Model

social networking Web site will make users feel that the site is a useful vehicle for social interactions, and it may prompt them to keep on using the site and to exchange information there [1, 40, 46]. Once the Web site also provides product and shopping information, the user may also choose to continue using the Web site. Therefore, it is reasonable to assume that a user's social commerce intention and continuance intention will be influenced by the perceived Web site quality. Hence, the following two hypotheses are postulated:

***Hypothesis 2a:** Web site quality is positively associated with a user's social commerce intention.*

***Hypothesis 2b:** Web site quality is positively associated with a user's continuance usage intention.*

Mediating Effects of Relationship Quality

From the relational perspective, relationship quality plays a significant mediating role between system features and system success. For social media, the main purpose is to build relationship. Therefore, it is reasonable to assume that relationship quality plays a mediating role between social support, Web site quality, and the outcome of social commerce intention and continuance intention.

The mediating proposition recognize two stages of relationships: one is the effect of social support and Web site quality on relationship quality, and the

other is the effect of relationship quality on social commerce intention and continuance intention.

Strong social support makes a user feel connected to friends as well as builds trust with those friends [11, 49]. That is, the social support in a social networking Web site can bring psychological benefits to users and satisfy their psychological needs [36, 44]. Such benefits make the user feel that the Web site relationship is satisfactory and the social networking site is valuable. Therefore, if users receive stronger support from their friends in a social networking site, the derived relational benefits will influence their intention to continue using that Web site. The perception of social support in a social networking site not only contributes to the relationship quality with the social networking service provider but also results in the intention to use the social networking site again and again [3, 4, 28, 43].

In addition, since a well-designed social networking Web site can better satisfy users' needs for social interactions, the users will receive a good impression of the Web site quality and have confidence in the service provider's performance [12]. This will improve the relationship quality between users and social networking service provider. Consequently, Web site quality may affect the relationship quality with a service provider [40, 43].

Thus, we propose the following hypotheses:

Hypothesis 3a: *Social support in a social networking Web site is positively associated with the relationship quality between users and the Web site.*

Hypothesis 3b: *Web site quality is positively associated with relationship quality between users and the Web site.*

Prior studies have demonstrated a positive relationship between relationship quality and user retention [18, 20, 37, 43]. The higher the relationship quality between a user and a service provider, the higher the possibility a user will continue interacting with the service provider. In the social commerce context, when the relationship quality between a user and a social networking Web site is high, users are more trusting and committed, more satisfied with the services offered by the service provider, and more confident in using the Web site to interact with their friends [12]. Therefore, users will be willing to maintain the relationship with the service provider in order to continue obtaining good services [18, 43]. For users who are also shoppers, a social networking Web site is not only a platform for social interactions but also a channel for sharing purchasing experiences and obtaining useful product information and recommendations. Better relationship quality will positively influence users' social commerce intention and continuance usage intention. This leads to the following hypotheses:

Hypothesis 4a: *Relationship quality between users and a social networking Web site positively influences the users' social commerce intention.*

Hypothesis 4b: *Relationship quality between users and a social networking Web site positively influences the users' continuance usage intention.*

Empirical Study

To test the hypotheses, we developed a questionnaire and conducted a survey to collect the necessary data. Details of the study are described below.

Instrument Development

The research model includes five constructs: social support and Web site quality as independent variables, relationship quality as the mediating variable, and intention of continuance use and social commerce intention as dependent variables. A questionnaire developed for measuring the constructs in the research model is shown in Table 1. All questionnaire items were measured on a five-point Likert-scale from 1 (strongly disagree) to 5 (strongly agree).

Social support includes two dimensions: informational support and emotional support. *Informational support* was measured by items that assess the perception that the messages received from friends on a social networking site provide the needed assistance. *Emotional support* was measured by items that assess the perception that the messages received from friends on a social networking site include emotional concerns such as caring, understanding, and empathy [24].

Web site quality was measured by two components: system quality and service quality. System quality assesses a user's perception of the degree to which a social networking site possesses desired functional capabilities such as availability, reliability, and response time. Measurement items for system quality were adapted from Negash et al. [34]. Service quality assesses the degree to which a user's overall evaluation of the services delivered by a social networking Web site, including tangible support, reliability, responsiveness, assurance, and empathy, are perceived by the user. Measurement items for service quality were adapted from Jiang et al. [23].

The mediating variable, relationship quality, is a second-order construct consisting of three dimensions: trust, commitment, and satisfaction. Trust is a user's belief that the social medium is honest and benevolent; commitment is the degree to which a user is willing to maintain the relationship with the Web site. Trust and commitment were measured by items adapted from Garbarino and Johnson [17]. Satisfaction is the degree to which a user is pleased with the overall experiences of using the social medium. The measurement items were adapted from Crosby et al. [12].

The dependent variables are social commerce intention and continuance intention. Social commerce intention measures the degree to which a user is willing to share and request commercial information on social networking sites. Since there was no existing measurement reported in previous studies, we designed items to assess a user's intention to recommend shopping information and products and the intention to receive shopping information and products on social networking sites. Continuance intention is an indicator that shows the degree to which a user intends to continue using the social networking site. Measurement items were adapted from Bhattacharjee [4]. A pilot study was conducted with 60 individuals to pretest the questionnaire

Table 1. Constructs and Items.

Constructs	Items
Social Support	
Emotional Support	EMS01: When faced with difficulties, some people on the Plurk are on my side with me. EMS02: When faced with difficulties, some people on the Plurk comforted and encouraged me. EMS03: When faced with difficulties, some people on the Plurk listened to me talk about my private feelings. EMS04: When faced with difficulties, some people on the Plurk expressed interest and concern in my well-being.
Informational Support	IFS01: On the Plurk, some people would offer suggestions when I needed help. IFS02: When I encountered a problem, some people on the Plurk would give me information to help me overcome the problem. IFS03: When faced with difficulties, some people on the Plurk would help me discover the cause and provide me with suggestions.
Website Quality	
System Quality	STQ01: Plurk has a function that allows users to provide quick responses and feedback. STQ02: Plurk gives me a variety of alternatives for solving my problems. STQ03: Plurk provides a friendly user interface. STQ04: Plurk makes it easy to contact my friends. STQ05: Plurk makes it easy to provide information to my friends. STQ06: Plurk has up-to-date hardware and software.
Service Quality	SVQ01: Plurk provides a dependable service. SVQ02: Plurk provides error-free messages. SVQ03: Plurk tells the user the operational situation of its system. SVQ04: Plurk gives prompt service to users. SVQ05: Plurk is always willing to help users to apply its services. SVQ06: I feel safe when I use Plurk. SVQ07: Plurk pays attention to the user's individual needs. SVQ08: Plurk understands the specific needs of its users.
Relationship Quality	
Commitment	CMT01: I am proud to belong to the membership of Plurk. CMT02: I feel a sense of belonging to Plurk. CMT03: I care about the long-term success of Plurk.
Trust	TST01: The performances of Plurk always meets my expectations. TST02: Plurk can be counted on as a good social networking site. TST03: Plurk is a reliable social networking site.
Satisfaction	STS01: I am satisfied with using Plurk. STS02: I am pleased with using Plurk. STS03: I am happy with Plurk.
Social Commerce Intention	SCI01: I am willing to provide my experiences and suggestions when my friends on the Plurk want my advice on buying something. SCI02: I am willing to share my own shopping experience with my friends on Plurk. SCI03: I am willing to recommend a product that is worth buying to my friends on the Plurk. SCI04: I will consider the shopping experiences of my friends on Plurk when I want to shop. SCI05: I will ask my friends on the Plurk to provide me with their suggestions before I go shopping. SCI06: I am willing to buy the products recommended by my friends on Plurk.

(continues)

Table 1. Continued.

Constructs		Items
Continuance Intention	CUI01:	I intend to continue using Plurk rather than discontinue its use.
	CUI02:	My intention is to continue using Plurk rather than using other microblogging sites.
	CUI03:	If I could, I would like to discontinue my use of Plurk (R).

Note: (R) = reverse question.

before the large-scale survey. Some minor wording problems were resolved and the result indicated that the instrument was reliable and valid.

Data Collection

The survey was conducted in Taiwan in June 2010 on a popular microblogging Web site (www.plurk.com). The Web site was established in 2008 and currently supports 20 different languages, with around 34.4 percent of visitors from Taiwan and 30 percent from Southeast Asia (<http://zh.wikipedia.org/wiki/Plurk/>). A total of 463 responses were received, of which 52 were dropped due to incomplete data. The valid respondents included 189 males and 222 females; 94 percent were between the ages of nineteen and thirty, 95 percent held a bachelor's degree or higher, and 64 percent were students. More than half the respondents had at least 10 years of computer usage experience, and 51 percent of the respondents reported that they spent at least 4 hours a day sharing information with their friends on Plurk.com.

Data Analysis and Findings

Construct Reliability and Validity

The measurement model was assessed using partial least squares (PLS). As shown in Table 2, the values for all constructs exceed 0.7, meeting the suggested threshold [35]. This shows an acceptable composite reliability. For construct validity, both congruent validity and discriminant validity were examined. Congruent validity was assessed by average variance extracted (AVE) and indicator loadings. AVE values are greater than the recommended level of 0.5 [19]. All factor loadings are also highly significant in a *t*-test, and loading scores are all above the desired threshold of 0.7, except for two indicators in system quality (STQ02 and STQ06) that only satisfied the minimum requirement of 0.5. Discriminant validity was assessed by the AVE values for each construct, which should be greater than the squared correlation estimates involving the construct [16]. As shown in Table 3, all AVE values (shaded numbers) met this criterion (greater than the off-diagonal numbers) showing an acceptable discriminant validity.

Table 2. Construct Reliability and Validity.

Constructs	Indicators	Loadings	CR	AVE
First-order construct				
Emotional support	EMS01	0.875***	0.93	0.76
	EMS02	0.888***		
	EMS03	0.843***		
	EMS04	0.877***		
Informational support	IFS01	0.865***	0.92	0.79
	IFS02	0.904***		
	IFS03	0.890***		
System quality	STQ01	0.731***	0.87	0.53
	STQ02	0.625***		
	STQ03	0.700***		
	STQ04	0.828***		
	STQ05	0.803***		
	STQ06	0.650***		
Service quality	SVQ01	0.798***	0.92	0.58
	SVQ02	0.753***		
	SVQ03	0.756***		
	SVQ04	0.756***		
	SVQ05	0.775***		
	SVQ06	0.787***		
	SVQ07	0.738***		
	SVQ08	0.715***		
Trust	TST01	0.863***	0.91	0.77
	TST02	0.900***		
	TST03	0.875***		
Satisfaction	STS01	0.890***	0.93	0.81
	STS02	0.924***		
	STS03	0.884***		
Commitment	CMT01	0.779***	0.86	0.67
	CMT02	0.853***		
	CMT03	0.827***		
Social commerce intention	SCI01	0.766***	0.91	0.63
	SCI02	0.828***		
	SCI03	0.832***		
	SCI04	0.805***		
	SCI05	0.761***		
	SCI06	0.764***		
Continuance intention	CUI01	0.898***	0.85	0.65
	CUI02	0.720***		
	CUI03	0.791***		
Second-order construct				
Social support	Emotional support	0.942***	0.93	0.85
	Informational support	0.901***		
Web site quality	System quality	0.880***	0.92	0.77
	Service quality	0.883***		
Relationship quality	Trust	0.861***	0.92	0.75
	Satisfaction	0.886***		
	Commitment	0.845***		

Notes: CR = composite reliability; AVE = average variance extracted. *** $p < 0.001$.

Table 3. Square of Correlation Between Constructs.

	1	2	3	4	5	6	7	8	9
1. Emotional Support	0.76								
2. Informational Support	0.49	0.79							
3. System Quality	0.23	0.26	0.53						
4. Service Quality	0.11	0.13	0.37	0.58					
5. Trust	0.14	0.15	0.35	0.40	0.77				
6. Satisfaction	0.27	0.22	0.32	0.24	0.38	0.81			
7. Commitment	0.18	0.18	0.21	0.19	0.37	0.40	0.67		
8. Social Commerce Intention	0.18	0.24	0.24	0.13	0.15	0.18	0.16	0.63	
9. Continuance Intention	0.21	0.17	0.22	0.15	0.17	0.40	0.21	0.16	0.65

Notes: Numbers on the diagonal (in boldface) are the average variance extracted. Other numbers are the square of correlation.

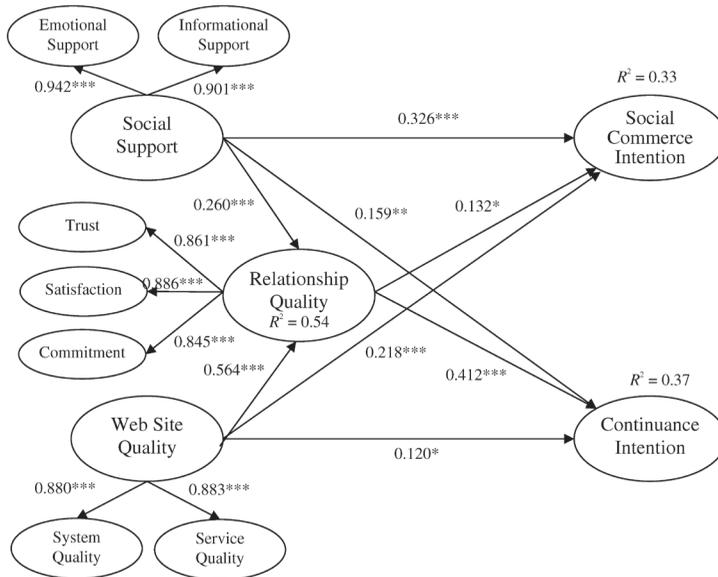


Figure 2. Results of the PLS Analysis

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Structural Model

The research model was tested with the structural equation modeling method. The resulting estimations from PLS are shown in Figure 2. All the paths are positively significant at the 0.05 level. The model fits (R^2) show that it accounts for 54 percent, 33 percent, and 37 percent of the variance in relationship quality, social commerce intention, and continuance intention, respectively. Thus, they indicate an acceptable level of explanation power. The relationships among constructs are interpreted below.

Direct Effects of Social Support and Web Site Quality

Social support and Web site quality both have significant effects on social commerce intention and continuance intention. Hence, H1a, H1b, H2a, and H2b are supported. The effects of social support and Web site quality on relationship quality are also significant. Thus, H3a and H3b are supported.

The path coefficients show that the direct effect of social support on social commerce intention is stronger than that of Web site quality (0.326 vs. 0.218). This indicates that social support in a social network is more important than the Web site design in affecting a user's intention to share social commerce information. A similar relationship is found in the effects of social support and Web site quality on continuance intention (0.159 vs. 0.120). The difference is smaller for continuance intention, however.

Mediating Effect of Relationship Quality

With respect to the mediating effects, we can examine the influence of social support and Web site quality on relationship quality (H3a and H3b) and the influence of relationship quality on social commerce intention and continuance intention (H4a and H4b), respectively. Again, all the path coefficients are significant and positive, which indicates that all four hypotheses are supported.

The path coefficients show that relationship quality has a stronger effect on continuance intention to use the Web site than that on social commerce intention (0.412 vs. 0.132). Its effect size on social commerce intention is also smaller than the direct effect of social support. This shows that social support is the most important factor that affects a user's intention to share and use commercial information in social media. Relationship quality is primarily determined by Web site quality (0.564), rather than by social support (0.26). This is reasonable because relationship quality primarily measures a user's perception of the quality of system functions and services. However, we do find that social support positively affects the perceived relationship quality. This supports our argument that social support is an important ingredient in the success of social media and can be used to measure the content quality of social media.

Discussion and Conclusion

The popularity of social media has opened a new arena of business and research opportunities. In this paper we have adopted the social support theory and the relationship perspective to investigate how these social constructs would affect a user's intention to continuously use the Web site and intention to share and receive commercial information on the Web site. This sheds light on the existing literature on Web site usage that focuses on the design quality. A research model that combines social support, relationship quality, and Web site quality has been proposed and was evaluated in this empirical study. Our findings show that (1) social support, as measured by informational and emotional support, has a significant positive effect on the intention to continue using the Web site and the intention to conduct social commerce; (2) social support has positive effects on relationship quality, which in turn affects the intention to continue using the Web site and the intention to conduct social commerce; (3) Web site quality also has positive effect on the intention to continue using the Web site and intention for conducting social commerce, but its effect size is smaller than that of social support; and (4) relationship quality plays a partial mediating role in enhancing the intention to continue using and the intention for conducting social commerce.

These findings have a few important implications for researchers and practitioners who are interested in social commerce. First, the results show that social factors can play an important role in facilitating online commerce. Social support in this research is one of the social factors involved in social networking. There are other factors whose effects are worth further investiga-

tion. The reason that social support is important in social commerce is because supportive interactions among social network members let them feel closer to one another and more comfortable in exchanging information. The supportive climate will also encourage the users in a social networking Web site to continue their relationship with the Web site. Furthermore, most people join a social networking Web site with the expectation of interacting with friends comfortably and conveniently. Without such a supportive climate, the motivation for continuance use and information sharing would diminish. This also implies that a decision about how to facilitate the maintenance of such a supportive environment is a key issue that social commerce providers have to think carefully about when they run social commerce sites.

Second, maintaining and enhancing Web site quality is also a basic requirement for social commerce. This is consistent with previous findings about Web site success. Online interactions are facilitated by information technology. Web sites are the media for interactions, and the quality of the media can directly affect the interaction process and its outcome. High-quality Web sites can better help users connect to and exchange information with their friends conveniently and comfortably. Therefore, enhancing the perceived system and service quality is important for social media operators.

Third, relationship quality as measured by trust, commitment, and satisfaction is a significant mediator between Web site quality and a user's intention to continuance use and intention to conduct social commerce. Relationship quality has been found to be important for user retention and customer loyalty. This finding is consistent with existing literature such as [27]. Relationship quality of a social networking site is affected by both Web site quality and social support among the community.

Overall, the research findings suggest that a social networking Web site with good Web site functions, services, and supportive social culture in its virtual communities is more likely to retain its members and facilitate the conduct of social commerce. The contributions of the findings are twofold. First, we have explored the relationship perspective and the key role of social support in social media use and social commerce, which has not been investigated in the previous e-commerce literature. We have found that social support is more influential than Web site quality on user loyalty (continuance intention) and social commerce intention. This creates a new theoretical basis for investigating commercial behavior on social media and a new direction for future research. Second, the findings imply that practitioners who are running social media sites and intend to conduct social commerce there need to consider not only how to provide good functions and services on the Web site but also how to cultivate a supportive climate in the associated communities in order to maintain a good relationship with the users. This can effectively enhance user loyalty and intention to share commercial information.

Although the findings are interesting, the study is not without limitations. First, the empirical study used for evaluating our theoretical model was conducted on a microblog-based social networking site, so the result may not be directly applicable to other social commerce sites such as Facebook or Groupon. A second potential limitation is that the analysis was based on survey data. Although we have done everything possible to ensure that the survey was

conducted in a rigorous way, what the users said may not be the same as what they would do, and the result might be different from the actual user behavior. This is the inherent limitation of survey studies. The third potential limitation is that there are multiple types of social support in the real social networks. Only informational and emotional supports were included in our study, hence the final result can only be interpreted on these two chosen support forms. Finally, the study was done in one country with a fairly homogeneous population. Generalization to other forms of social support or other social and cultural environments needs to be further investigated.

Nonetheless, the findings, which show the important role of social support and relationship quality, do shed much light on the loyalty and social commerce intention and add valuable contribution to our understanding of commercial behavior on social media. In the future, more social factors and antecedents of relationship quality could be investigated to extend this work. The outcome variable may also be the observed behavior, rather than the continuance intention. Finally, different social commerce models (e.g., group shopping or location-based shopping) may be valuable future research environments for investigation.

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