

# Interaction between Habit and Belief, and its Impact on Brand Loyalty in Social Commerce Based on Self-perception Theories

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## Abstract

This paper aims to examine how belief interacts with habit, affecting brand loyalty in social commerce. Belief, categorized as behavior beliefs, normative beliefs and control beliefs, refers to the desire to develop and maintain relationships with green supply chain partners. The model is tested on data collected from 363 valid samples in Taiwan, using structural equation modeling. The results show that, in order of importance, control beliefs and behavioral beliefs are the major factors contributing to the relationship between habits and brand loyalty, whereas normative beliefs have no significant effect. The findings of the study provide practical insights into how sellers should focus on developing consumers' beliefs in order to enhance brand loyalty for social commerce as a whole.

**Keywords:** habits; behavior beliefs; normative beliefs; control beliefs; brand loyalty

## INTRODUCTION

Brand loyalty constitutes a key factor in establishing and sustaining successful social commerce. The concept of brand loyalty assists with a better understanding of the link between consumers and brands. It is also a strategic objective in marketing management, especially concerning consumer goods. True brand loyalty simultaneously involves a repetitive buying behavior and a positive attitude towards the brand (Dick & Basu, 1994). Brand loyalty can maintain a long-term relationship between the buyer and the seller.

Social commerce is rapidly emerging as an extension of e-commerce, primarily due to the increased popularity of social networking sites (SNSs), such as Facebook, LinkedIn, and Twitter (Hajli, 2015). These sites provide functions (such as the Facebook's "Like" and "Share" buttons, and "Comment" function) that make it easy for users to share information with their friends and other users. The spreading of messages through EWOM can increase consumer acceptance of brand loyalty. By sharing shopping information, product

knowledge, or purchasing experience among social network members, consumers can also make more informed and accurate purchase decisions (Zhou, Zhang, & Zimmermann, 2013). Learning theory identifies habits as a form of automation, and through the observation and research of community commerce, one can see that consumers use their social platforms through customary and identical behaviors. Relatedly, Chen, Lin and Lee (2017) refer to the existence of sharing language and sharing vision in social commerce.

To achieve the advantages of brand loyalty through community websites, consumer habits constitute a key factor. The extant literature has empirically examined the moderating effect of habits on the link between trust and repeat purchase intention (Chiu, Hsu, Lai, & Chang, 2012), and the relationship between satisfaction and brand loyalty (e.g., Anderson & Srinivasan, 2003; Khalifa & Liu, 2007). Previous research acknowledges the positive effects of beliefs in building customer loyalty. Much existing work has investigated precisely how consumer beliefs about the potential benefits of online shopping (e.g., saving time, saving money, finding a product that matches one's needs) influence online purchase behavior, and the relationship between consumer beliefs and online purchase behavior (Punj, 2011). In many of these researches, it is argued that the effects of the determinants of repeat purchase

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intention may be contingent on the habit of online

shopping (Khalifa & Liu, 2007). However, little is currently known about the implications that the inter-relationship between beliefs and habits have for effective brand loyalty in social commerce. Many consumers believe that shopping online will provide three main benefits: (1) it can save time; (2) it can save money; and (3) it can help to find products that meet the consumer's needs. However, precisely how these beliefs, alone or in combination, affect online purchasing behavior remains undetermined (Punj, 2011). The theory of consumption values (Sheth, Newman, & Gross, 1991) provides an appropriate conceptual framework to examine how consumption values and beliefs influence consumer decisions. For instance, how consumers allocate time and money while shopping constitutes a key issue (Punj, 2011).

To address the important issue of brand loyalty augmentation in the context of social business, a research model is developed in this study to elucidate the inter-relationship between beliefs, habits, and brand loyalty. This study bundles the theory of planned behavior (TPB) (Ajzen, 1985) and justice theories to illustrate and provide a more complete explanation of the underlying mechanisms. To verify this research model, an empirical study of Taiwan's consumers using social commerce sites was conducted.

## LITERATURE REVIEW

### 1.1 Consumer Decision-Making and Brand Loyalty in Social Commerce

How to choose its brand to make a decision, which is an important concept of consumer behavior research. Consumer behavior is decision-making behavior that comprises consumers purchasing and using products or services. Consumers engage in consumption, and disposal of products or services, involving a variety of activities, including decision-making, including in and around these actions occurred (Engel & Roger, 1978). Consumer behavior is also considered in the resale of non-consumption (resale) (Nicosia, 1966). Consumer behavior is a decision-making process in which people evaluate, acquire, and engage in economic decision-making processes involving acquiring the goods or services and taking the requisite actions. (Demby, 1974).

From these definitions, one can see that, prior to the final purchase decision, many factors influence a consumer, a process that is referred to as "consumer decision-making behavior." The EKB model is applied to consumer behavior. Using the

model as a foundation, the focus is on the following five core stages of the decision-making process: (1)

problem recognition; (2) search; (3) alternative evaluation purchase; (4) choice; and (5) outcomes.

The theory of planned behavior (TPB) (Ajzen, 1985) is an extension of the theory of reasoned action (TRA) (Ajzen & Fishbein, 2005). TPB is a widely used model to predict consumer behavior. TPB is utilized as a theoretical framework to interpret consumers' behavior in the online environment (Lodorfos, Trosterud, & Whitworth, 2006). This is because purchasing from a website is a behavior that is influenced by Internet customers' attitudes, beliefs, and perceptions (Song & Zahedi, 2005). This study applies this theory to provide an appropriate conceptual framework for how to determine how consumption values and beliefs influence the consumer's decision.

Habits are a repetitive act. Consumer habits play a key role in establishing business brand loyalty. Our main purpose is to study the habits of consumers to make repeat purchases, the ultimate goal of which is brand loyalty. For any business platform, the most important ability is to allow consumers to habitually visit and use the store, which is achieved by earning the trust of consumers. Many community platforms provide overseas purchasing services, the main purpose of which is to provide consumers with high quality and brand products. When these are provided, consumer satisfaction rises, and consumers are more willing to repeatedly purchase through the site. By understanding consumers' habits of shopping patterns, it is possible to indirectly determine the importance of habit for mobile commerce. Morgan and Hunt (1994) regard belief as an intention. This trust between the two sides is requisite to establish a kind of partnership. Dwyer, Schurr and Oh (1987) defining trust is about believing that partners engage in social skills.

The emergence of community business has changed the traditional business model of purchasing. A major development is that, through consumer communication online, more consumers can be induced to make purchases. Valid metrics are needed in order to develop a model to investigate this process.

Behavior belief, general belief, and control belief are designed as dependent variables. This design process is mainly to determine whether brand loyalty will be affected by interference variables.

### 1.2 Habit

Habits are behavioral dispositions to repeat past actions that develop through frequent performance in a stable context (Ouellette & Wood,

1998). When we perform a continuous unconscious behavior and do not require thinking to do this, this becomes a habit. Moreover, the more often we perform a behavior, the more likely it is to become a habit. While often used to describe a behavior, habit is not a behavior in itself, but rather it is a mind-set that drives a person to perceive habit-related stimulus cues (Lankton, Wilson, & Mao, 2010). If individuals habitually perform a particular behavior, the predictive power of intention is weakened (Chiu et al., 2012). Studies in different contexts have found that habitual behavior can result in repeating the same behavior (Zhang, Zhang, Lee, & Feng, 2014). Habit even increases the continuance of existing behavior (Campbell & Cochrane, 1995). The role of habit in repeat purchase intention has been demonstrated (Rauyruen, Miller, & Groth, 2009).

The habitual previous preference to use an online shopping

website directly (Gefen, 2000). Habits can strongly increase user intentions to continue using the same online shopping website (Chiu et al., 2012).

Habit theory supports the habit-continuance intention relationship because prior habitual behaviors can produce favorable feelings toward the behavior, thereby increasing continuance intention (Kim & Malhotra, 2005). Moreover, the effect of trust on repeat purchase intention will decrease when online shopping behavior becomes more of a habit (Chiu et al., 2012). Habit has been demonstrated to predict one's future behavior (Bamberg, Ajzen, & Schmidt, 2003). It is important for online sellers to understand why buyers are willing to make repeat purchases (Chiu et al., 2012). Therefore, this study applies the theory to use habit as an antecedent factor to explore influence on brand loyalty. In table 1, we have compiled the habits of research content in social commerce.

Table 1. Illustrative research summarizing the antecedents to habits in social commerce

Illustrative research	Context	Antecedents to habits in social commerce	Key findings or propositions
Lin et al. (2006)	Habit may posit a significant impact	users' characteristics, user's behavior	The findings suggest that consumer loyalty in the context of mobile commerce and found that habit may posit a significant impact
Liao et al. (2006)	How habit can predict behavior	The roles of habit and web site quality in e-commerce	The findings define habit as the extent to which people use IT automatically due to their past learning behavior.
Limayem et al. (2003)	Force of habit and information systems Usage.	IT habit	The findings suggest that using Sina Microblog for following microbloggers has become natural to me.

### 1.3 Belief

Electronic business research has examined the topic of customers' continued intention to purchase. It has been shown that customer belief features can play a crucial role in affecting self-perceptions. Ekman et al. (1973) found strong and consistent evidence that people perceive emotional expression accurately. We consider motivations that concern self-perception, the most powerful of which is the motive for self-enhancement. Although the self is an essential aspect of every person, we do not think about it continually. Instead, our level of self-awareness varies depending on both the situation and our personality.

Self-awareness is a psychological state in which people are aware of their traits,

feelings, and behavior. A social networking site is a social network of individuals who interact through social commerce. An understanding of

how beliefs and consumption values influence purchase behavior can assist online retailers to create more value for consumers, thereby reducing price sensitivity and enhancing retailer margins (Punj, 2011). Numerous researchers suggest that trust is particularly important in the context of online shopping because a spatial and temporal distance exists between buyers and online sellers (Chiu et al., 2012). According to the theory of planned behavior, human action is guided by three kinds of considerations: (1) beliefs about the likely outcomes of the behavior and the evaluations of these outcomes (behavioral beliefs); (2) beliefs about the normative expectations of others and motivation to comply with these expectations (normative beliefs); and (3) beliefs about the presence of factors that may facilitate or impede performance of the behavior and the perceived power of these factors (control beliefs). Thus, research has been performed on customer

beliefs and continued intention to use in social commerce. We examined the most important factors that affect customer belief in social

commerce. In Table 2, we have compiled the content of consumers' beliefs in social commerce.

Table 2. Illustrative research summarizing the antecedents to beliefs in social commerce

Illustrative research	Context	Antecedents to habits in social commerce	Key findings or propositions
Weiner (1986)	Attribution theory	By users of technological designs on the three trusting.	The findings suggest that the differences in people's stability attributions of the trusting.
Wang et al. (2007)	Trust theory	A belief or a collection of beliefs	Recommendation agents for electronic commerce: Effects of explanation facilities on trusting beliefs.
Benlian et al. (2012)	Perceived usefulness (PU) and perceived ease of use (PEOU)	given technology will be used.	The findings suggest that a wide range of cognitive and emotional factors influence such beliefs.

### (1) Behavior beliefs

The concept of behavioral beliefs is related to behavioral intention, in which an individual wants to take a specific action (Ajzen, 1991). Whether one decides to take a particular action depends on a selection process. Behavioral beliefs link the behavior of interest to expected outcomes. A behavioral belief is the subjective evaluation of the probability that the behavior will produce a given outcome. Although a person may hold many behavioral beliefs with respect to any behavior, only a relatively small number are readily accessible at a given moment. Most contemporary social psychologists take a cognitive or information-processing approach to attitude formation. This approach is exemplified by Fishbein and Ajzen's (1991) expectancy-value model of attitudes. According to this model, attitudes develop reasonably from the beliefs that people hold about the object of the attitude. In general, we form beliefs about an object by associating it with certain attributes, i.e., with other objects, characteristics, or events. In the case of attitudes toward a behavior, each belief links the behavior to a certain outcome or to some other attribute, such as the cost incurred by performing the behavior. Since the attributes that come to be linked with the behavior are already valued positively or negatively, we automatically acquire an attitude toward the behavior. In this fashion, we learn to favor behaviors that we believe have largely desirable consequences, and we form unfavorable attitudes toward behaviors that we associate with mostly undesirable consequences (Ajzen, 1991).

### (2) Normative beliefs

Normative belief is related to social influence. This belief is concerned with the likelihood that important referent individuals or groups approve or disapprove of performing a given behavior. TPB postulates the influence of other people through

normative belief in impacting individuals' behavior (Ajzen 1991). Each normative belief about an important other is multiplied by the person's motivation to comply with that important other, and the products are summed across all of the person's important others to result in a general measure that predicts subjective norms. A subjective norm is a predictor of intention to behave which, in turn, is a predictor of actual behavior. Normative beliefs refer to perceived behavioral expectations of such important referent individuals or groups as the person's spouse, family, friends, and - depending on the population and behavior studied - teacher, doctor, supervisor, and coworkers. It is assumed that these normative beliefs, in combination with the person's motivation to comply with the different referents, determine the prevailing subjective norm. Specifically, the motivation to comply with each referent contributes to the subjective norm in direct proportion to the person's subjective evaluation of the probability that the referent thinks that the person should perform the particular behavior. Normative beliefs are individuals' beliefs about the extent to which other people who are important to them think they should or should not perform particular behaviors. This belief is related to social influence.

### (3) Control beliefs

Control beliefs are also known as personal beliefs about the ease or difficulty of implementation of the expected behavior (Jaeki & John, 2005). These control beliefs' factors are based on past experience to constrain the future of behavioral intentions. Control beliefs may be based in part on past experience with the behavior, but they will usually also be influenced by second-hand information about the behavior, the experiences of acquaintances and friends, and other factors that increase or reduce the perceived difficulty of performing the behavior in question

(Ajzen, 1991). Control beliefs are concerned with the perceived presence of factors that may facilitate or impede performance of a behavior. It is assumed that these control beliefs, in combination with the perceived power of each control factor, determine the

prevailing perceived behavioral control. Specifically, the perceived power of each control factor to impede or facilitate performance of the behavior contributes to perceived behavioral control in direct proportion to the person's subjective evaluation that the control factor is present. In online shopping, customers may feel constrained by their lack of adequate knowledge and skill, such as knowledge about the given language or the currency, or by their unfamiliarity with the website's format and presentation. Consequently, they may prefer to reduce the mental effort that they expend on online shopping (Jarvenpaa & Todd, 1996).

#### 1.4 Brand loyalty

Repetitive behavior is an issue concerning brand loyalty that is worth exploring. Brand loyalty is defined as a consumer's repetitive and systematic purchasing behavior of a given brand (Touzani & Temessek, 2009). Buying behavior then constitutes an indication of the loyalty of the consumer (Brown, 1953). When consumers form a habitual behavior regarding a brand, then they will be more likely to develop a strong loyalty toward the brand (Zhang et al., 2014). The value of a brand or brand equity is largely created by brand loyalty (Mohd Yasin, Nasser Noor, & Mohamad, 2007). However, an important issue is determining precisely how to establish brand loyalty. Brand loyalty refers to consumers' sense of attachment to preferred brands or companies. Consumers believe that the benefits received from a special brand are more than they would receive from other alternative choices, Brand loyalty highlights consumers' strong faith in repeatedly purchasing products from one brand without evaluating external information. Compared to consumers with high brand loyalty, consumers with low loyalty are likely to search for alternative products (Zhang et al., 2014).

Since loyalty is associated with future purchase intention, it is critical to improve consumers' loyalty (Zhang et al., 2014). If customers are loyal to a brand even in the face of competitors' brands with superior features, this means that the brand has a substantial value to the customers. Consumers can be considered as loyal when they purchase a brand in a habitual manner (Touzani &

Temessek, 2009). Retaining loyal customers can be even more difficult than initially acquiring them. Even though pursuing consumer reliability costs time and effort, it constitutes the most valuable asset of a successful company. Brand loyalty is the consumer brand-preference psychological reaction, reflecting that the customer values and depends on the

brand. Consumers with brand loyalty exhibit a brand-biased behavioral response during purchases. This is not only a course of action, but also a psychological decision-making and evaluation process. It is extremely important for business survival, development, and increased market share for companies to increase brand loyalty. Repetitive buying behavior over a period of time then constitutes an indication of the loyalty of the consumer (Brown, 1953). Therefore, this study applies this concept to provide an appropriate conceptual framework for the influence of habit on brand loyalty.

#### RESEARCH MODEL

Figure 1 shows the entire research model and relationships among its factors. Eight hypotheses were tested with respect to this model. Each hypothesis is indicated by the letter H and a number. The arrows indicate the hypothesized relationships.

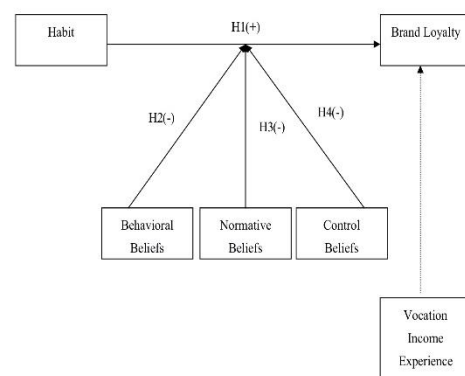


Figure 1. The research models

Note. H1: Habit has a positive effect on brand loyalty. H2: Behavioral beliefs decrease the positive effect of habit on brand loyalty. H3: Normative beliefs decrease the positive effect of habit on brand loyalty. H4: Control beliefs decrease the positive effect of habit on brand loyalty.

#### 2.1 Habit

In social commerce, habit is a core issue that



must be considered, for instance, concerning consumers creating the habit of repeat purchases of a business to enhance brand loyalty. Researchers argue that the effects of the determinants of repeat purchase intention may be contingent on the habit of online shopping (Khalifa & Liu, 2007). Previous literature argues that habit exerts a moderating effect on the link between repeat purchase intention and its antecedents (e.g., trust and

satisfaction) (Anderson & Srinivasan, 2003; Chiu et al., 2012). Habit exerts a direct effect on brand loyalty. (Hsu, Chang, & Chuang, 2015). It is thus hypothesized that:

**H1:** Habit has a positive effect on brand loyalty

### 2.2 Behavioral beliefs

Behavioral beliefs are related to behavioral intention (Ajzen, 1991), in which an individual wants to take a specific action. Whether one decides to engage in this behavior is determined in a selection process. This refers to the subjective intention that a particular behavior is consistent with the attainment of expected results. It is thus hypothesized that:

**H2:** Behavioral beliefs decrease the positive effect of habit on brand loyalty

### 2.3 Normative beliefs

Normative beliefs are related to social influence. TPB postulates the influence of other people through normative beliefs in impacting individuals' behavior (Ajzen, 1991). People's habits may be under the influence of family, friends, or other people. The influence of people around one constitutes the major factor of normative beliefs. Information may come from other people's recommendations. Accordingly, it is hypothesized that:

**H3:** Normative beliefs decrease the positive effect of habit on brand loyalty

### 2.4 Control beliefs

Control beliefs are personal beliefs about the ease or difficulty of implementation of the expected behavior (Song & Zahedi, 2005). These control beliefs' factors are based on past experience to constrain the future of behavioral intentions. If consumers' habits produce the anticipated behavior, the effect is likely to be influenced by control beliefs. It is thus hypothesized that:

**H4:** Control beliefs decrease the positive effect of habit on brand loyalty

### 2.5 Control variables

Participants are categorized into three types: vocation, income, and experience. Shopping experience is a potential factor, as its effect on future online shopping has been identified, and thus it is likely to have an impact on the link between customers' habits (Chiu, Lin, Sun, & Hsu, 2009). Customers with longer shopping experience tend to be more familiar with, or have habits of, online shopping compared to those with less shopping experience (Wu, 2013).

## RESEARCH METHOD

To develop the survey instrument, a pool of items was identified from the literature for measuring the constructs of the research model. Data from an online survey sample were collected to assess the instrument's validity and reliability, and to test the hypothesized relationships of the research model.

### 3.1 Content Validity

All measures of the survey instrument were developed from the literature. Where appropriate, the manner in which the items were expressed was adjusted to the context of an online auction site, as shown in Table 3. The English version was developed first, then translated into Chinese, and then back-translated into English. When the back-translated English version was checked against the original English version, some questions were reworded to improve the accuracy of the translation. The expressions of the items were adjusted where appropriate to the context of the online auction site industry. The items were measured on a seven-point Likert scale, ranging from 'strongly disagree' (1) to 'strongly agree' (7).

### 3.2 Pre-text and pilot-test

In order to improve the content and appearance of the 15-item questionnaire, a pre-test was performed on a sample comprising four academic researchers and four Ph.D. students. The respondents were asked to complete the questionnaire and provide comments on the wording, understandability and clarity of the items, as well as on the overall appearance and content of the instrument. The responses suggested that all statements were retained, and only minor cosmetic changes were needed. After a further review by two other academic researchers, the instrument was deemed ready to be sent to a large sample in order to gather data for testing our research model.

### 3.3 Data Collection

The empirical study aims at those Internet

users who have experience using online shopping customers. An online survey was chosen for fast and accurate data collection, and because it is much easier to administer compared to a traditional paper survey. In an effort to maximize

the responses, among all respondents whose responses were valid, 20 were randomly chosen to receive a token gift. Finally, 363 valid samples were collected, and the general data analysis is listed in table 4.

Table 3. Constructs and measures of the research items

Construct		Source
Habit		
HA1	You are addicted to using the social commerce website to shop.	Liao, Palvia, and Lin (2006); Hsu et al. (2015)
HA2	The social commerce website is where you go first to shop.	
HA3	Shopping at the social commerce website is natural to you.	
Behavioral beliefs		
BB1	Looking for information.	Kwon and Onwuegbuzie (2005)
BB2	Researching topics, you are interested in.	
BB3	Getting quick and easy access to large volumes of information.	
Normative beliefs		
NB1	Shopping at the social commerce website will be influenced by your family members.	Lim and Dubinsky (2005)
NB2	Shopping at the social commerce website will be influenced by your colleagues.	
NB3	Shopping at the social commerce website will be influenced by a successful person or celebrity.	
Control beliefs		
CB1	This Web vendor would be competent in providing objective information about this product.	Pavlou and Fygenson (2006)
CB2	This website would be useful for getting valuable information about this product.	
CB3	Getting information about this product from this website would be easy.	
Brand loyalty		
BL1	The social commerce website would be your first choice.	Yoo and Donthu (2001)
BL2	You will not stop on other sites as long as you can access the social commerce website.	
BL3	You would use the social commerce website services again.	

## DATA ANALYSIS AND RESULTS

Structural equation modeling (SEM) with AMOS 21.0 was used to analyze the hypothesized relationships of the research model. SEM aims to examine the interrelated relationships among a set of posited constructs simultaneously, in which each construct is measured by one or more observed items (measures). It involves the analysis of two models: a measurement (or factor analysis) model and a structural model. The measurement model specifies the relationships between the observed measures and their underlying constructs, with the constructs are allowed to inter-correlate. The structural model specifies the posited causal relationships among the constructs.

### 4.1 Assessment of the measurement model

The measurement model specified for the research was assessed to ascertain the extent to which the observed measures (surveyed items) actually measured their corresponding construct. The 15 items of the survey instrument were first analyzed to assess their dimensionality and measurement properties. All items loaded

significantly and substantially on their underlying constructs, thus providing evidence of convergent validity. Using a confirmatory factor analysis, all items were found to perform well and were thus retained in the model.

The chi-square of the measurement model was significant ( $\chi^2 = 224.491$ ,  $df = 115$ ,  $p < 0.005$ ), with the value of ( $\chi^2 / df$ ) smaller than 2, indicating an ideal fit (Bentler, 1990). The large chi-square value was not surprising, since the chi-square statistic has been shown to be directly related to sample size (Jöreskog & Sörbom, 1993). To assess the overall model fit without being affected by sample size, alternative stand-alone fit indices less sensitive to sample size were used. These indices included the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA) (Jöreskog & Sörbom, 1993). For a good model fit, the GFI should be close to 0.90, AGFI more than 0.80, CFI more than 0.9, and RMSEA close to 0.06 (Jöreskog & Sörbom, 1993; Hair, Anderson, Tatham, & Black, 1998). An assessment of the measurement model

suggests an acceptable model fit (GFI = 0.935; AGFI = 0.904; CFI = 0.988; NFI = 0.976; RMSEA = 0.051).

To assess the reliability of the constructs, composite reliability (CR) was facilitated. All of the composite reliability values, ranging from a low of 0.845 to a high of 0.999, exceeded the recommended cut-off value of 0.80 (Jöreskog & Sörbom, 1993; Hair et al., 1998). A variable's

squared multiple correlations (SMC) is the proportion of its variance that is accounted for by its predictors. The average variance extracted

(AVE) was greater than 0.5 in all cases, meaning that the variance accounted for by each of the constructs

was greater than the variance accounted for by measurement error (Jöreskog & Sörbom, 1993; Hair et al., 1998). In addition, an assessment of discriminant validity between the constructs supported the model fit. Table 3 summarizes the assessment results of the measurement model.

Table 4. General data analysis

Categories	Number of people	Percentage
<b>Gender</b>		
Male	153	42.10%
Female	210	57.90%
<b>Age</b>		
Less than 19	21	5.80%
20-24	219	60.30%
25-29	66	18.20%
30-34	21	5.80%
35-39	16	4.40%
40-44	9	2.50%
45-49	7	1.90%
More than 50	4	1.10%
<b>Education</b>		
Junior	1	0.27%
High school	28	7.71%
University	193	53.16%
Graduate school	141	38.84%
<b>Vocation</b>		
Student	213	58.67%
Incumbent	123	33.88%
Incumbent	123	33.88%
Retiree	4	1.10%
Unemployed	11	3.03%
Homemaker	4	1.10%
Other	8	2.20%
<b>Average monthly income (NT \$)</b>		
Less than \$10,000	191	52.61%
\$10,001 to 29,999	90	24.79%
\$30,000 to \$49,999	60	16.52%
\$50,000 to \$69,999	14	3.85%
\$70,000 and above	8	2.20%
<b>Social commerce site experience:</b>		
Below 6 months	47	12.94%
6 months - 1 year	26	7.16%
2 years - 3 years	50	13.77%
4 years - 6 years	130	35.81%
Over 6 years	110	30.30%
<b>Have you used social commerce in the past year?</b>		
Yes	312	85.95%
No	51	14.04%



#### **4.2 Assessment of the structural model**

Table 6 shows the inter-correlations between the six constructs of the structural model. The overall fit of the structural model is acceptable, since all measures of fit reach an acceptable level ( $\chi^2 = 224.491$ ,  $df = 115$ ,  $\alpha < 0.005$ ; GFI = 0.935; AGFI = 0.904; CFI = 0.988; NFI = 0.976; RMSEA = 0.051).

Table 5. Assessment results of the measurement model

Construct	Item	Standardized loading	Standardized error	t-value	R2	CR	AVE
Habit	HA1	0.891	0.035	27.585***	0.793	0.931	0.819
	HA2	0.912	0.039	27.580***	0.831		
	HA3	0.912	0.038	27.589***	0.832		
Behavioral beliefs	BB1	0.981	0.016	64.816***	0.963	0.987	0.962
	BB2	0.983	0.015	66.339***	0.967		
	BB3	0.978	0.015	64.826***	0.956		
Normative beliefs	NB1	0.847	0.041	22.004***	0.717	0.915	0.783
	NB2	0.898	0.042	23.152***	0.728		
	NB3	0.908	0.050	22.005***	0.824		
Control beliefs	CB1	0.974	0.015	65.283***	0.950	0.987	0.962
	CB2	0.984	0.013	75.303***	0.969		
	CB3	0.985	0.015	65.284***	0.971		
Brand loyalty	BL1	1.040	0.074	17.617***	0.497	0.984	0.954
	BL2	0.965	0.045	18.974***	0.932		
	BL3	0.922	0.044	17.433***	0.836		

Note. \*\*\* denote significance at  $\alpha = 0.001$

Table 6. Correlation matrix of constructs

Construct	(1)	(2)	(3)	(4)	(5)
(1) Habit	0.905				
(2) Behavioral beliefs	-0.548***	0.981			
(3) Normative beliefs	-0.417***	-0.474***	0.885		
(4) Control beliefs	0.489***	0.738***	0.599***	0.981	
(5) Brand loyalty	0.694***	-0.564***	-0.460***	0.591***	0.977

Note. \*\*\* denote significance at  $\alpha = 0.001$

#### 4.3 Comparison with alternative models

This paper followed the procedure suggested by (Anderson & Gerbing, 1988) and evaluated two models, as shown in Table 7. The first was the model 1 in which the nine items form into three first-order factors (i.e., behavioral beliefs, normative beliefs, and control beliefs). The second hypothesizes that one first-order factor (i.e., beliefs) accounts for all of the common variance among the nine items.

To test whether the proposed model should be accepted compared to the alternative model, sequential chi-square difference tests (SCDTs) were conducted by calculating the difference between chi-square statistic values for the proposed model and the alternative model, with degrees of freedom equal to the difference in degrees of freedom for the two selected models. The results are presented in Table 7. A significant result satisfied the conditions suggested by Anderson and Gerbing (1988). The results indicated that the proposed model was relatively superior.

Table 7. Comparison of alternative models

Attribute	Model 1: proposed model	Model 2: alternative model
$\chi^2$ (df)	224.491	298.213
$\chi^2$ difference		73.722
df difference		5
SCDTs ( $\alpha=0.05$ )		Significant

#### 4.4 Common method bias

Following the suggestion of Podsakoff and Organ (1986), Harmon's one-factor test was run to ensure that common method variance did not account for our findings. Unrotated principal components analysis revealed six factors with eigenvalues greater than 1, which accounted for 52.435% of the total variance. The first factor did not account for the majority of the variance (31.496%). This assessment constitutes evidence that no single factor accounted for most of the variance.

This study examined the data for empirical evidence of common methods bias by conducting

a

confirmatory factor analysis (CFA), which included a construct representing an unmeasured methods factor. It is assumed that common method variance is not a serious problem if the one-factor model has a poor fit with the data (Handley & Benton, 2012). To develop the one-factor model, the first step is to load all of the measurement items into a single factor. The CFA results indicated that the one-factor model did not fit the data ( $\chi^2 = 978.313$ ,  $df = 134$ ;  $GFI = 0.730$ ;  $AGFI = 0.656$ ;  $CFI=0.908$ ;  $NFI=0.895$ ;  $RMSEA=0.132$ ). Thus, the result concluded that common method bias does not appear to be a problem in the study.

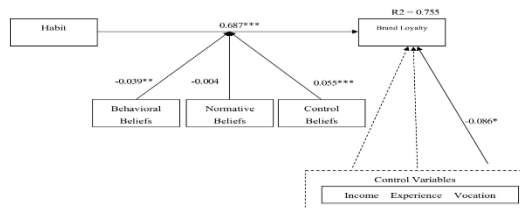


Figure 2. The research model

Note. \*, \*\* and\*\*\*denotes significance at  $\alpha \leq 0.05$ , 0.01 and 0.001respectively

#### 4.5 Hypotheses testing

Figure 2 shows the structural model with the coefficients for each path (hypothesized relationship), where solid and dashed lines indicate a supported and unsupported relationship, respectively. Habit ( $H1: \gamma = 0.687$ ,  $t = 12.513$ ,  $p < 0.001$ ) is significantly associated with brand loyalty. Behavioral beliefs ( $H2: \gamma = -0.039$ ,  $t = -2.128$ ,  $p < 0.05$ ) is significantly associated with habit. Normative beliefs ( $H6: \gamma = -0.004$ ,  $t = -0.286$ ,  $p > 0.05$ ) is not significantly associated with habit. Control beliefs ( $H4: \gamma = 0.055$ ,  $t = 2.385$ ,  $p < 0.05$ ) is significantly associated with habit. Vocation ( $\gamma = -0.086$ ,  $t = -1.990$ ,  $p < 0.05$ ) is significantly associated with brand loyalty.

#### 4.6 Control variables

According to the research model described in Figure 2, to understand brand loyalty, it is necessary to control for income, experience, and vocation. A total of 363 valid questionnaires were received. Income and experience ( $t$  value = 0.044 and 1.357) exhibited no significant differences at the 0.05 level. However, vocation ( $t$  value = -1.990) showed significance at the 0.05 level.

## DISCUSSION

### 5.1 Results

Conforming to the hypothesis, belief influences

habits of brand loyalty. In Taiwan's social

commerce, these factors play the most significant role in brand loyalty. Habit can promote consumers to enhance the feeling of brand loyalty. Thus, social commerce should improve good beliefs, so that habit could assist to advance brand loyalty.

Belief is positively associated with habit in social commerce. In Taiwan's social commerce, it is a critical factor in brand loyalty. Belief here means that the value of a product depends on the total number of users. An understanding of how beliefs influence purchase behavior can assist social commerce to create more value for consumers (Punj, 2011).

According to the experiment, behavior beliefs are negatively correlated, but significantly associated, with habit. When consumers look for product information, they conduct a wide search as a focus of online shopping to save money (Punj, 2011), and will thus compare the prices of products. If the result of the search is not what they want, they will conduct another search, and thus will not become accustomed to the particular social commerce site. However, but since consumers will continue the behavior overall, such as searching for goods, it will be a significant habit.

Normative beliefs are found not to be significantly associated with habit. Normative beliefs form due to the influence of groups on individuals (Ajzen, 1991), and most of the participants in our study are students. Students are shown to be consistently more susceptible to reference group influence (Park & Lessig, 1977). Students also often come into contact with family and friends (Smith et al., 2010). Because peers are easily influenced, everyone from different websites to compare. In the comparative process, consumers frequently use social commerce that are introduced to them by their peers.

According to the experiment, control beliefs are positively and significantly associated with habit. When the consumer interface facilitates easy operation of the site, consumers are more likely to use that site. In these cases, consumers can feel that these sites are truly "their" sites, and this may greatly affect their intention (Song & Zahedi, 2005). Overall, when consumers habitually use certain community business platforms, beliefs are reinforced, and habits are created that result in brand loyalty towards these platforms.

Habit is positively associated with brand loyalty, which agrees well with prior research (Chiu et al., 2012). As long as consumers exhibit repeated and systematic purchasing behavior,

brand loyalty will be improved (Touzani & Temessek, 2009). For enterprises, it is essential to improve consumer

purchase intention to increase consumer loyalty (Zhang et al., 2014). For consumers, when they are accustomed to buying a brand, they can be considered as loyal (Touzani & Temessek, 2009). Enterprise strategy should retain consumption habits and move consumer choice towards their own business.

## 5.2 Theoretical implications

With the development of this novel research model, the theoretical contributions of this study to the literature are described as follows. The results from our study contribute to the field of brand loyalty. Existing research has rarely acknowledged that these dependent variables in social commerce are necessary to achieve competitive advantages. The benefits of improved brand loyalty might come from retaining existing customers, as well as attracting new ones (Awan & Rehman, 2014). Consequently, the present study attempted to fill this gap by identifying the influences of habit and belief on brand loyalty. This study makes a theoretical contribution to linking habit, belief, and brand loyalty for exploring online shopping between online consumers. The theoretical framework of the model can also be applied to other forms of online shopping relationships involving brand loyalty.

## 5.3 Managerial and practical implications

Our findings help corporate managers manage and establish brand loyalty. It is possible to build consumer online brand loyalty anywhere through virtual communities. Consumers can share their shopping experience and important information through online social platforms. This study provides multiple insights for consumers seeking to improve brand loyalty in social commerce. Brand loyalty is critical not only to physical stores, but also online stores, and its development constitutes a major factor in obtaining and maintaining a competitive advantage. To sustain customers and strengthen this competitive advantage, effective strategies to increase customers' beliefs need to be devised and implemented (Liao et al., 2006). Much extant consumer behavior research focuses on decision-making rather than the beliefs themselves (Hoyer, 1984), or on customer satisfaction and confidence in development. This gap exists despite evidence which suggests that choices do not always follow beliefs, underlining the need to examine belief

formation more closely (Netemeyer & Bearden, 1992). Beliefs are particularly important because they can continue to substantially affect consumers' emotional and loyalty.

Our results demonstrate that belief is the major factor contributing to brand loyalty. Specifically, in the case of behavioral beliefs, higher intenders were significantly more likely than lower intenders to believe that they would receive quality products. Normative beliefs were determined by being around groups, including family and friends. Regarding control beliefs, significant multivariate effects were found for age, gender, and income. The most important managerial implication and practical insight is that developing beliefs is the key to enhancing brand loyalty in social commerce. We recommend that managers promote their social networking sites and increase social interactions of consumers to establish a consumer brand-relationship community platform.

## CONCLUSION AND FUTURE RESEARCH

This empirical research is among the earliest studies attempting to address issues of habit to improve brand loyalty in social commerce. The contributions of this study are described as follows. First, the study shows how habit influences brand loyalty. Second, beliefs are demonstrated to influence habit and brand loyalty. Consequently, practical insights are provided for understanding how social commerce should re-examine its habit logistics in order to augment desired beliefs, resulting in increasing brand loyalty for social commerce as a whole.

This study developed a new framework, through accounting for the influence of consumer habits and beliefs, that can be utilized to increase brand loyalty and customer loyalty. Since social commerce is continually becoming more competitive, determining precisely and reliably how to get consumers to come back to the enterprise constitutes a critical issue. Of course, it is not only requisite to retain existing customers, but also to obtain new ones.

This study's survey methods are somewhat limited. First, in the data collection, due to the use of an online survey, most participants were reluctant to reveal their true identity. Thus, it was difficult to determine if a participant's identity was his or her actual one. Second, although this study provided a reward to some participants, this study could not identify repeat identities. Third, the size of the research sample could be expanded.

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### REFERENCES

- attitudes on behavior," *The handbook of attitudes*, 21, (3), 173-221.
- [3] Anderson, J. C., and Gerbing, D. W., 1988. Structural equation modeling in practice: A review and recommended two-step approach, *Psychological bulletin*, 103(3):411.
- [4] Anderson, R. E., and Srinivasan, S. S., 2003. E-satisfaction and e-loyalty: A contingency framework, *Psychology and marketing*, 20(2), 123-138.
- [5] Awan, A. G., and Rehman, A.-u., 2014. Impact of customer satisfaction on brand loyalty-an empirical analysis of home appliances in Pakistan, *British Journal of Marketing Studies*, 8(2), 18-32.
- [6] Bamberg, S., Ajzen, I., and Schmidt, P., 2003. Choice of travel mode in the theory of planned behavior: The roles of past behavior, habit, and reasoned action, *Basic and applied social psychology*, 25(3) 175-187.
- [7] Bentler, P. M., 1990. Comparative fit indexes in structural models, *Psychological bulletin*, 107(2) 238.
- [8] Brown, G. H., 1953. Brand Loyalty-fact of fiction, *Trademark Rep*, 43(4) 251.
- [9] Campbell, J. Y., and Cochrane, J. H., 1995. By force of habit: A consumption-based explanation of aggregate stock market behavior, *National Bureau of Economic Research*, 11(2) 25-40.
- [10] Chen, Lin and Lee, 2017. Influence of Ambidextrous Governance Mechanisms and Risk Management on Repurchase Intention in Social Commerce, *Internet Research*, 11(5):11-20.
- [11] Chiu, C.-M., Hsu, M.-H., Lai, H., and Chang, C.-M., 2012. Re-examining the influence of trust on online repeat purchase intention: The moderating role of habit and its antecedents, *Decision Support Systems*, 53(4): 835-845.
- [12] Chiu, C.-M., Lin, H.-Y., Sun, S.-Y., and Hsu, M.-H., 2009. Understanding customers' loyalty intentions towards online shopping: an integration of technology acceptance model and fairness theory, *Behaviour and Information Technology*, 28(4): 347-360.
- [13] C. Liao, P. Palvia, and H.N. Lin, 2006. The roles of habit and web site quality in e-commerce, *International Journal of Information Management*, 26(6) 469-483.
- [14] <http://dx.doi.org/10.1016/j.ijinfomgt.2006.09.001>.
- [15] Demby, E., 1974. *Psychographics: From Whence it Came*, ed. Wells, DW *Life Style and Psychographics*, 11(23) 211-233.
- [16] Dick, A. S., and Basu, K., 1994. Customer loyalty: toward an integrated conceptual framework, *Journal of the academy of marketing science*, 22(2) 99-113.
- [17] Dwyer, F. Robert, Paul H. Schurr, and Sejo Oh, 1987. Developing buyer-seller relationships, *The Journal of marketing*, 4(2) 11-27.
- [18] Ekman, P., 1973. Cross-cultural studies of emotion, *A century of research in review*, 5(1) 169-222.
- [19] Engel, J. F., and Roger, D., 1978. Blackwell, and David T. Kollat, *Consumer Behavior: Hinsdale, Illinois, The Dryden Press*, 6(8):410-430.
- [20] Gefen, D., 2000. E-commerce: the role of familiarity and trust, *Omega*, 28, (6) 725-737.
- [21] Handley, S. M., and Benton, W., 2012. The influence of exchange hazards and power on opportunism in outsourcing relationships, *Journal of Operations Management*, 30(1) 55-68.
- [22] F.D. Davis., 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology, *Mis Quarterly*, 13(3) 319-340. <http://dx.doi.org/10.2307/249008>.
- [23] H.H. Lin, and Y.S. Wang., 2006. An examination of the determinants of customer loyalty in mobile commerce contexts, *Information and Management*, 43(3) 271-282. <http://dx.doi.org/10.1016/j.im.2005.08.001>.
- [24] Hoyer, W. D., 1984. An examination of consumer decision making for a common repeat purchase product, *Journal of consumer research*, 11(3) 822-829.
- [25] Hsu, M.-H., Chang, C.-M., and Chuang, L.-W., 2015. Understanding the determinants of online repeat purchase intention and moderating role of habit: The case of online group-buying in Taiwan, *International Journal of Information Management*, 35(1) 45-56.
- [26] Jöreskog, K. G., and Sörbom, D., 1993. LISREL 8: Structural equation modeling with the SIMPLIS command language, Scientific Software

- International2,12-50,
- [27] Jarvenpaa, S. L., and Todd, P. A., 1996. Consumer reactions to electronic shopping on the World Wide Web, *International journal of electronic commerce*, 1(2) 59-88.
- [28] Khalifa, M., and Liu, V., 2007. Online consumer retention: contingent effects of online shopping habit and online shopping experience, *European Journal of Information Systems*, 16, (6) 780-792.
- [29] Kim, S. S., and Malhotra, N. K., "A longitudinal model of continued IS use: An integrative view of four mechanisms underlying postadoption phenomena, " *Management science*, Vol.51, No.5: 741-755, 2005.
- [30] Kwon, N., and Onwuegbuzie, A. J., 2005. " Modeling the factors affecting individuals' use of community networks: A theoretical explanation of community-based information and communication technology use, " *Journal of the American Society for Information Science and Technology*, 56(14) 1525-1543.
- [31] Lankton, N. K., Wilson, E. V., and Mao, E., 2010. Antecedents and determinants of information technology habit, *Information and Management*, 47(5) 300-307.
- [32] Liao, C., Palvia, P., and Lin, H.-N., 2006. The roles of habit and web site quality in e-commerce, " *International Journal of Information Management*, 26(6) 469-483.
- [33] Lim, H., and Dubinsky, A. J., 2005. The theory of planned behavior in e-commerce: Making a case for interdependencies between salient beliefs, *Psychology and Marketing*, 22(10) 833-855.
- [34] Lodorfos, G. N., Trosterud, T. A., and Whitworth, C., 2006. E-consumers' attitude and behavior in the online commodities market, *Innovative Marketing*, 2(3) 77-96.
- [35] M. Limayem, and S.G. Hirt., 2003. Force of habit and information systems usage: Theory and initial validation, *Journal of the Association for Information Systems*, 4(1) 65-97.
- [36] Mohd Yasin, N., Nasser Noor, M., and Mohamad, O., 2007. Does image of country-of-origin matter to brand equity? *Journal of Product and Brand Management*, 16(1) 38-48.
- [37] Morgan, R. and Hunt, S., 1994. The commitment-trust theory of relationship marketing, *Journal of Marketing*, 3(5) 12-31.
- [38] Netemeyer, R. G., and Bearden, W. O., 1992. A comparative analysis of two models of behavioral intention, *Journal of the Academy of Marketing Science*, 20(1) 49-59.
- [39] Nicosia, F. M., 1996. CONSUMER DECISION PROCESSES, MARKETING AND ADVERTISING IMPLICATIONS, 7(1) 53-67.
- [40] Ouellette, J. A., and Wood, W., 1998. Habit and intention in everyday life: the multiple processes by which past behavior predicts future behavior, *Psychological bulletin*, 124(1) 54.
- [41] Park, C. W., and Lessig, V. P., 1977. Students and housewives: Differences in susceptibility to reference group influence. *Journal of consumer research*, 4(2) 102-110.
- [42] Pavlou, P. A., and Fygenon, M., 2006. Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior, *MIS quarterly*, 21(2) 115-143.
- [43] Podsakoff, P. M., and Organ, D. W., 1986. Self-reports in organizational research: Problems and prospects, *Journal of management*, 12(4) 531-544.
- [44] Punj, G., 2011. Effect of consumer beliefs on online purchase behavior: the influence of demographic characteristics and consumption values, *Journal of Interactive Marketing*, 25(3) 134-144.
- [45] Rauyruen, P., Miller, K. E., and Groth, M., 2009. B2B services: linking service loyalty and brand equity, " *Journal of Services Marketing*, 23(3) 175-186.
- [46] Sheth, J. N., Newman, B. I., and Gross, B. L., 1991. Why we buy what we buy: A theory of consumption values, *Journal of business research*, 22(2) 159-170.
- [47] Smith, J. R., Liu, S., Liesch, P., Callois, C., Yi, R., and Daly, S., 2010. The role of behavioral, normative, and control beliefs in the consumption of Australian products and services by Chinese consumers, *Australasian Marketing Journal (AMJ)*, 18(4) 206-213.
- [48] Touzani, M., and Temessek, A., 2009. Brand loyalty: Impact of cognitive and affective variables, *Journal of business research*, 22(11) 23-54.
- [49] Wang, W., and Benbasat, I., 2007. Recommendation agents for electronic commerce: Effects of explanation facilities on trusting beliefs, *Journal of Management Information Systems*, 23(4) 217-246.
- [50] Weiner, B., 1986. An Attributional Model of Motivation and Emotion, " *New York: Springer-Verlag*, 21(4) 111-134.
- [51] Wu, L., 2013. The antecedents of customer satisfaction and its link to complaint intentions



in online shopping: An integration of justice, technology, and trust, *International Journal of Information Management*, Vol. 33(1)166-176.

- [52] Yoo, B., and Donthu, N., 2001. Developing a scale to measure the perceived quality of an Internet shopping site (SITEQUAL), *Quarterly journal of electronic commerce*, 2(1) 31-45.
- [53] Zhang, H., Zhang, K. Z., Lee, M. K., and Feng, F., 2014. The Value of It Habit in Microblogs on Brand Loyalty, *International Journal of Electronic Commerce Studies*, 5(1) 63.
- [54] Zhou, L., Zhang, P., and Zimmermann, H.-D., 2013. Social commerce research: An integrated view, *Electronic Commerce Research and Applications*, 12(2)61-68.