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A study on information disclosure, trust, reducing search cost, and online group-buying intention

Online group-buying
intention

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Abstract

Purpose – More and more disputes have quickly emerged and accumulated, hence generating uncertainties and doubts among consumers regarding the online group-buying. In order to decrease such uncertainties, the purpose of this paper is to explore the relationships among information disclosure, trust, reducing search cost, and online group-buying intention, as well as proposing concrete suggestions for enhancing online group-buying intention.

Design/methodology/approach – In order to explore the relationships among information disclosure, trust, reducing search cost, and online group-buying intention, the questionnaire and statistical analytical techniques were used. Moreover, as this study was an early attempt to develop a model for information disclosure, trust, reducing search cost, and online group-buying intention, partial least square therefore was appropriately to analyze data.

Findings – The results showed that the level of information disclosure and trust on a group-buying website have positive influence on reducing search costs, while reducing search costs and trust have positive influences on online group-buying intention.

Research limitations/implications – This research applied a purposive sampling method and obtained a slightly inadequate number of respondents. Therefore, it is suggested that future research should apply a random sampling method to collect more responses and increase the generalizability of the findings.

Practical implications – By more actively disclosing information it is possible for group-buying websites to increase consumer trust and decrease search costs, thus enhancing their group-buying intentions.

Originality/value – There are few studies on the relationships among reducing search cost, trust, and group-buying intention from the perspective of information disclosure. This study thus applies a questionnaire survey method to explore the relationships among them. This study also offers concrete suggestions to enhance group-buying intentions, and provides marketing strategies that can be used by online group-buying websites to raise their sales.

Keywords Information disclosure, Trust, Online group-buying intention, Reducing search cost

Paper type Research paper

1. Introduction

Online group-buying originated from groups of users who gathered enough other buyers on websites or blogs to negotiate lower prices with sellers. However, this approach can fail if there are not enough buyers, or conflicts may arise when the group-buying leader has collected money from the other participants and the goods do not arrive on time. Such uncertainties mean that the reliability of the person in charge of a group-buying activity is a crucial factor that influences the decision to engage in online group-buying or not (Yoon, 2002; Pavlou and Gefen, 2004). In other words, when a consumer has greater trust in the group-buying leader, then this will raise their purchase



intention. A number of dedicated group-buying websites have thus been created in order to overcome these problems. For example, the Gomaji and Groupon provide great diversity of discounts for various products, such as health, restaurants, foods, beauty, cinema and entertainment, training programs, and tour packages in Taiwan (Hsu *et al.*, 2014, 2015). These communicate directly with the merchants so that it is possible to sell products or services at less than the market price. As a result, consumers cannot only reap the benefits of economies of scale, like big retailers are able to, but also avoid the problems of trying to setup such deals on their own, thus further enhancing their purchase intention.

However, consumers still face some risks when purchasing in this manner. For example, some restaurants with offers on group-buying websites may claim that they are fully booked and it is impossible to reserve a table. Other retailers may not explain certain purchase restrictions in advance, and there may be significant differences between the products that are received and those that were advertised. It implies that group-buying websites or some retailers keep asymmetric information and motivation to hide/disclose certain types of information, expecting some benefits or signaling the intention. Therefore, consumers usually search for information regarding the price, merchant's reputation, product quality, delivery, payment mechanism, and so on, and then decide whether they will make a purchase or not (Howard and Sheth, 1969; Midgley, 1983). In other words, it is important that the group-buying websites honestly and accurately discloses information related to the products or services it offers. After a review of the literature, it was found that most studies focus on issues such as consumer motivations, influential factors and electronic word of mouth in relation to online group-buying activities (Hsu *et al.*, 2014, 2015; Cheng and Huang, 2013; Li *et al.*, 2014; Lim and Ting, 2014). In contrast, there are few studies on the relationships among reducing search cost, trust and group-buying intention from the perspective of information disclosure. Therefore, this study examines the level of information disclosure and trust on such websites to investigate the influence of reducing search costs and trust on their group-buying intentions.

2. Theoretical background and hypotheses

This study investigates the relationships among information disclosure, reducing search costs, trust, and group-buying intention with regard to group-buying websites. It initially studies the influence of information disclosure and trust on reducing search costs, then the influence of trust on reducing search costs and group-buying intention, and finally the influence of reducing search costs on online group-buying intention, in order to provide specific suggestions for group-buying websites to develop more effective marketing strategies. The research model is shown in Figure 1, and each concept and research hypothesis are elaborated on below.

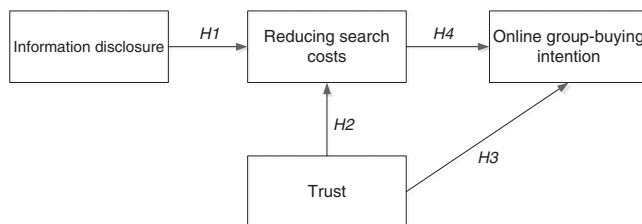


Figure 1.
Research model

2.1 Information disclosure

The basic concept of information disclosure comes from Akerlof (1970), who proposed the concept of asymmetric information. This states that the asymmetric information that exists between both buyers and sellers will generate a so-called “lemons” market. In this, when buyers cannot identify whether a product is good or bad, then they can only base their judgments on the average price. This eventually causes high-quality goods with a higher than average price to be pushed out of the market, with only low-quality, cheaper goods remaining. Information asymmetry and the conflicting incentives of buyers and sellers are the main triggers of this phenomenon, and one way to overcome this is for sellers to disclose more information (Lincoln, 1989). Abdelkarim *et al.* (2009) stated that the disclosure of relevant corporate information is an essential element of a market-based monitoring of firms. Disclosure and transparency induce firms to better protect investors, and thereby enhance investors’ confidence in capital markets. Likewise, when purchasing unfamiliar or high-value products in an online shopping environment, customers will collect information about the product and related recommendations to help their purchase decisions (Hurme, 2005). Information disclosure such website is thus aimed at increasing the transparency of the market and helping buyers make informed decisions, thus minimizing mistakes due to information asymmetry .

2.2 Search costs

Search and information costs emerge due to the imperfect information regarding the existence and location of trading opportunities or the quality or other characteristics of goods that are available for the transaction (Dahlman, 1979). To establish an exchange between both buyers and sellers require to search from information about the other, which can be expensive with regard to time and resources. If this search process succeeds and both buyers and sellers come into contact with each other, then an exchange opportunity may exist, although conveying this information also has costs associated with it. Kutlu (2012) pointed out that these are based on both the predicted transaction costs that are incurred before a contract is signed (e.g. costs related to searching, information collection, and negotiation) and the actual transaction costs after the contract has been signed (e.g. costs for monitoring and enforcing).

Liang and Huang (1998) studied on consumer acceptance of products in online markets and defined search costs as the perceived costs incurred at the stage of finding product or process-related information, such as finding an appropriate vendor. Lynch and Ariely (2000) defined search costs as those that arise when consumers desire to buy a certain product or service, and then need to search for and compare information about prices and quality. Similarly, Teo and Yu (2005) stated that before a transaction occurs, consumers usually search for information and then continue to observe the whole process in order to get the best deal possible. The costs related to such activities are called transaction costs. They further stated that searching costs include the time and effort needed to find information related to the focal products and services, and compare prices or other features among different online stores. In other words, search costs arise when consumers need to search for the right business partner, as well as information related to products and services in order to make a purchase decision (Solomon, 2014).

Lincoln (1989) claimed that by providing complete information and responding appropriately to any questions that arise it is possible for sellers to increase the degree of trust that buyers have in them, and thus improve their relationships. Lee (2008) found that information disclosure has no direct influence on the willingness of sellers to

authorize real estate brokers to sell their properties, however, information disclosure will decrease sellers' search cost in finding buyers although it does have an indirect effect. Zhang *et al.* (2010) stated that online businesses should provide consumers with complete transactions information, as this will decrease the degree of perceived risk and increase trust. While Chen and Lee (2012) pointed out that the level of information disclosure on dining blog will help decrease consumer search costs when looking for information on restaurants. Therefore, this study assumed that if group-buying websites can disclose enough information to satisfy consumer needs with regard to the products or services of interest, then it is possible to decrease the additional costs due to this information search, which will help increase group-buying intentions. This is restated in the following hypothesis:

- H1.* The higher level of information disclosure on a group-buying website has a significantly positive influence on reducing search costs.

2.3 Trust

Trust is based on the degree to which the parties involved in a transaction will fulfill their commitments, and not take advantage of each other (Bromiley and Cummings, 1995; Hosmer, 1995). Trust is based on past interactions that inspire confidence with regard to future actions (Gefen, 2000). Gambetta (2000) stated that trust makes it possible for a person or enterprise to have confidence in and do business with a partner, and it can be seen as a personal belief that the other party will follow the related social or business norms (Pavlou, 2003). Wu *et al.* (2008) stated that trust is when consumers believe that an online merchant is reliable and honest.

Anderson and Narus (1990) found out that when both parties find that there is a discrepancy between the expected and actual results, it will lead to unpleasant feelings that will negatively affect their trust. Gefen *et al.* (2003) utilized the technology acceptance model to investigate consumer trust in and intention to use online shopping. They divided trust into personality-based trust, cognition-based trust, knowledge-based trust, calculative-based trust, and institution-based trust. Personality-based trust is the likelihood that a person will trust others or not. Cognition-based trust evaluates how people build trust based on their initial impressions, rather than on personal interactions. Knowledge-based trust is based on familiarity with the vendor, which is built on experiences and everything else related to a focal event. Calculative-based trust is based on a rational estimation of the costs and benefits associated with the other party's actions, and whether they are cooperative or deceitful. Institution-based trust is the sense of security generated from the safety nets or other objective structures that exist within certain contexts.

Teo and Yu (2005) conducted a study on consumer behavior in an e-commerce context, and found that trust has a negative influence on transaction costs. Lee (2008) further elaborated that trusting relationships not only prevent frauds, but also decrease the cost of searching for information, thus reducing overall transaction costs. Keh and Xie (2009) stated that trust is based on the long-term relationships that develop between consumers and online businesses. Since higher levels of trust can help decrease the perceived risks associated with shopping online, it is thus a significant issue that influences such transactions (Reichheld and Scheffer, 2000). This is because if consumers trust a website then they will spend less time and effort searching for more information about it. Therefore, this study proposes the following hypotheses:

- H2.* The higher level of trust that consumers have with regard to a group-buying website will have a significantly positive influence on reducing search costs.

2.4 Group-buying intention

The concept of purchase intention refers to consumers' probability or subjective tendency to consider buying a certain product, and this is the key factor in predicting consumer behavior (Fishbein and Ajzen, 1975; Dodds *et al.*, 1991). Engel *et al.* (1995) claimed that consumer purchase behaviors are a continuous process, and that consumers make their final purchase decisions based on external information inputs and processing, general motivation and environmental forces. Therefore, consumers will have different preferences based on the sources of information they receive, and this will influence their purchase intentions (Liebermann and Flint-Goor, 1996). Sirakaya and Woodside (2005) further indicated that psychological or internal variables (e.g. motivation, attitudes, beliefs, intentions, and so on), as well as non-psychological or external variables (e.g. time, pull factors, and marketing mix) influence how consumers make their decisions.

Online group-buying is defined as an activity initiated by a certain group of consumers who build a group via the internet so that they can buy certain products or services at a discount (Cheng and Huang, 2013). Online group-buying intention thus refers to consumers' intention and subjective tendency to purchase an item on a group-buying website (Schiffman and Kanuk, 2009). From an economic perspective, Kauffman and Wang (2001) listed the following elements that influence such online group-buying markets: demand externalities, price, and price-level effect. Demand externalities means that the utility acquired after a consumer purchases a product will increase along with the number of buyers, while the number of the group-buying members will influence the potential consumers' purchase decisions. When there are more people in the group-buying activity, consumers will subjectively perceive that the reputation and quality of the goods and services on offer are better. Price in this context refers to the degree to which consumers focus on prices, and this favor items with greater discounts. The price-level effect refers to the degree to which consumers perceive and react to changes in the price of the focal products or services. In general, consumers search for goods with lower prices, and are less likely to make a purchase when the price increases.

Reichheld and Scheffer (2000) stated that trust is a crucial prerequisite for consumers to participate in a group-buying activity, while Gefen *et al.* (2003) claimed that trust will directly and positively influence the purchase decisions within an online retail environment. Palvia (2009) noted that trust is essential for building a long-term business relationship, as it will help encourage consumers to utilize a website by reducing the degree of uncertainty that they feel. In other words, the interactions that occur between buyers and sellers can produce more knowledge exchanges, which can help to decrease uncertainty and eventually increase purchase intentions. Therefore, this research assumes that consumer trust toward a group-buying website will influence their purchase intentions, as stated in the following hypothesis:

H3. Trust has a significantly positive influence on group-buying intention.

Liang and Huang (1998) claimed that search costs will affect purchase intentions, with lower search costs leading to stronger purchase intentions. Shao *et al.* (2004) stated that when customers are looking for products or services they will search for related information based on their experiences, and then will start considering or evaluating the possibility to purchase, as well as comparing different offers and then deciding on their purchase behavior. Furthermore, Li *et al.* (2013) pointed out that improving information flows and proactively providing consumers with more information related to a purchase will enable to acquire more of the information they need regarding the transaction via the related platform, and thus reduce search costs, all of which will

eventually increase consumers' intention to purchase on the group-buying website. Therefore, this study assumes that the more consumers can reduce search costs by using a group-buying website, the higher their purchase intention will be, as stated in the following hypothesis:

H4. The reducing search costs have a significantly positive influence on group-buying intention.

3. Methodology

3.1 Sampling

The integrity of the data that is collected for a study can be adversely affected by the low willingness of respondents to participate in this process. Purposive sampling was thus used in this work in order to ensure that respondents had high willingness to take part. The target respondents were those individuals who had made purchases on group-buying websites. The questionnaire was distributed to the target respondents via e-mail, social networks, and links on websites. The questionnaire was sent to the respondents on August 13, 2014, and 220 responses were returned by October 6, 2014. Of these, 19 were invalid because the respondents have never engaged in any group-buying activities, leaving a total of 201 valid questionnaires. Table I shows the demographic details of the sample, which includes data on the respondents' gender, marital status, age, education level, occupation and length of online group-buying experience.

3.2 Measures instruments

The measurement items of the questionnaire were based on relevant literature. This study defined information disclosure as all the information disclosed on the group-buying website (Lee, 2008). Due to the fact that previous studies have not applied a scale to

		Percentage of respondents	
<i>Gender</i>		<i>Marital status</i>	
Male	39.3	Single	59.2
Female	60.7	Married	39.8
		Other	1.0
<i>Age</i>		<i>Education</i>	
≤20 years old	25.4	High school and below	17.4
			10.4
			42.3
			29.9
			28.0
21-30 years old	35.8	College	27.2
31-40 years old	26.9	University	23.2
≥41 years old	11.9	Master's degree and above	21.6
<i>Occupation</i>		<i>Length of online group-buying experience</i>	
Student	21.9	Less than 1 month	22.9
Government sector	27.9	1-6 months	19.9
Service industry	27.9	7-12 months	15.4
Manufacturing industry	4.0	More than a year	41.8
High-tech industry	18.4		
Note: <i>n</i> = 201			

Table I.
Demographic characteristics of the respondents

measure information disclosure on group-buying websites, this work first attempted to design such a scale. This is consisted of 13 items, mainly based on the information disclosure scales proposed by Joslin (2005), Lee (2008) and Friedman *et al.* (2013). This research defines reducing search costs as the reduced costs associated with retrieving information about the contents, prices, and purchase process of the products and services (Teo and Yu, 2005). In the questionnaire this study refers to the measurement of reducing search costs proposed by Teo and Yu (2005), and examines these using three items. This research defines trust as the degree to which consumers trust the information regarding products and services presented on the group-buying website, and to what extent they perceive that the website operators proactively pursue and protect the consumers' interests (Singh and Sirdeshmukh, 2000). The seven questionnaire items for this are based on Doney and Cannon (1997). This research defines group-buying intention as consumers' subjective probability, intention, and prospects to purchase a product or a service from a group-buying website (Schiffman and Kanuk, 2009), and five items used to assess this are based on Dodds *et al.* (1991). The questionnaire items were written in Chinese and easily understood by the participants. The draft questionnaire was tested by scholars and experts, and this led to minor modifications in the wording of some items. After ensuring that all items were clear, the questionnaire was distributed and then collected via e-mails, social networks, and links on websites. A seven-point Likert-type scale, ranging from 1 (strongly disagree) to 4 (neutral) to 7 (strongly agree), was used for the items on information disclosure, reducing search cost, trust, and group-buying intention. The final questionnaire items and related references are presented in Table II. The research constructs were operationalized based on the related studies and a pilot test.

4. Results

This study used the partial least squares (PLS) structural equation modeling technique for data analysis. PLS aims to estimate parameters by minimizing the residual variances of all the dependent variables involved. The structural model describes the relationships among the latent variables posited by substantive theory, and the measurement model describes the relationships between the observed and latent variables. As compared to covariance-based SEM techniques, PLS is less stringent with regard to distributional assumptions, measurement scale type, and sample size requirement (Fornell and Cha, 1994; Chin, 1998a, b). Moreover, as this study was an early attempt to develop a model for information disclosure, trust, reducing search cost, and online group-buying intention, PLS therefore was appropriate. The Smart PLS program was used for the analysis. The structural model resulting from this analysis is presented in Figure 2.

4.1 The measurement model

First, exploratory factor analysis was employed and questionnaire items which had not reached the standard for factor selection were deleted. Factors were then named based on the relation of the questionnaire items for each factor. From the results of factor analysis, items ID5, ID6, and ID8 were thus omitted as their factor loadings were below 0.6. This research eventually only divided information disclosure into product/service information and discount information. Second, a null model was initially specified for the first-order latent variables, in which no structural relationships were included. To assess the reliability of the measures, the Cronbach's α (CA), composite scale reliability (CR), and average variance extracted (AVE) were calculated. Table III shows

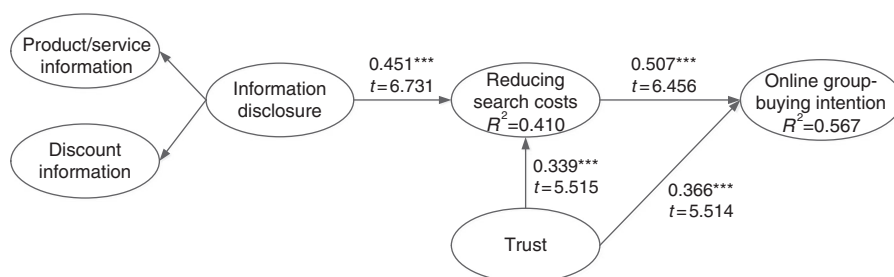
Research variables	Items	Reference sources
Information disclosure	ID1. The group-buying website honestly and accurately discloses information related to the products or services it offers	Friedman <i>et al.</i> (2013), Hsu <i>et al.</i> (2015), Joslin (2005) and Lee (2008)
	ID2. The group-buying website discloses information related to the transaction process	
	ID3. The group-buying website discloses information related to the quality of products and services it offers	
	ID4. The group-buying website discloses the additional fees related to the transaction of the products or services it offers (e.g. service fee, administration fee or installation fee, etc.)	
	ID5. The group-buying website discloses information related to the actual operating conditions of the products or services it offers (e.g. product photos, restaurant locations, details of atmosphere, etc.)	
	ID6. The group-buying website discloses information related to the product or service warranties	
	ID7. The group-buying website discloses information related to upcoming discounts (e.g. when a sale will occur)	
	ID8. The group-buying website discloses information related to the changes in the details of a sale	
	ID9. The group-buying website discloses information regarding discounts based on different regions	
	ID10. The group-buying website discloses information regarding discounts based on different types of products and services	
	ID11. The group-buying website provides information regarding the difference between the original prices and discounted ones (i.e. information about how much money you can save)	
	ID12. The group-buying website discloses information regarding the number of transactions in real time	
	ID13. The group-buying website discloses information regarding how much time remains before the sale ends	
Trust	TR1. The group-buying website is very committed to its promises to me	Doney and Cannon (1997), Hsu <i>et al.</i> (2014), Teo and Yu (2005) and Tsai <i>et al.</i> (2011)
	TR2. The group-buying website is very honest with me	
	TR3. The discounts presented on the group-buying website are worth trusting	
	TR4. When the group-buying website is making critical decisions, it will carefully consider my rights	
	TR5. The group-buying website will protect my interests.	
	TR6. The group-buying website cares about my needs	
	TR7. I consider that the group-buying website is worth trusting	
Reducing Search costs	SC1. Buying goods from the group-buying website helps me save time searching information related to the products or services it offers	Kutlu (2012), Lee (2008), Liang and Huang (1998), Maute and Forrester (1991), Srinivasan and Ratchford (1991),
	SC2. Buying goods from the group-buying website helps me save the effort needed to make buying decisions	

Table II.
The questionnaire items and related references

(continued)

Table II.

Research variables	Items	Reference sources
Group-buying intention	SC3. The group-buying website can help me save time to bargain with the retailer	Solomon (2014) and Teo and Yu (2005)
	GPI1. Buying products or services via the group-buying website can provide me with economic benefits	Dodds <i>et al.</i> (1991), Hsu <i>et al.</i> (2014), Hsu <i>et al.</i> (2015), Lin <i>et al.</i> (2011) and Schiffman and Kanuk (2009)
	GPI2. Buying products or services via the group-buying website is a good choice	
	GPI3. It is worth participating in the activities offered on the group-buying website	
	GPI4. The group-buying website has a positive image	
	GPI5. I will recommend the group-buying website that I currently use to my friends and family	

Figure 2.
PLS Structural
model

Note: ***Path coefficients significant at the $p < 0.001$ level

that all the CA and CR exceed 0.850 (Nunnally and Bernstein, 1994), while the AVE of all measures exceeds the cut-off value of 0.696 (Chin, 1998a, b). Moreover, Table IV shows that the square root of the AVE exceeds the intercorrelations of the construct with the other constructs in the model, thus showing good discriminant validity (Fornell and Larcker, 1981). Additional support for discriminant validity comes from an inspection of the cross-loadings, which were not substantial in magnitude compared with the loadings (Fornell and Cha, 1994; Chin, 1998a, b). As shown in Tables III and IV, the internal consistency reliability, indicator reliability, convergent validity, and discriminant validity were all good for the measurement scales used in this study (Urbach and Ahlemann, 2010).

Table V shows the CA, CR, and AVE of the measures in the second-order model, with all CA and CR being greater than 0.899, and all AVE greater than 0.5, thus indicating that the measures are reliable. All the loadings of the first-order latent variables on the second-order factors exceed 0.7, which provides support for the second-order model of information disclosure.

4.2 Structural model

The structural model aims to examine the relationships among a set of dependent and independent constructs. A bootstrapping analysis with 5,000 samples and the original 201 cases was performed to examine the significance of the path coefficients. The results of the PLS analysis of the research model are presented in Figure 2.

JEIM 29,6	Construct	Items	Loading	CA	CR	AVE
912	<i>Information disclosure</i>					
	Product/service information	ID1	0.834	0.908	0.936	0.785
		ID2	0.752			
		ID3	0.821			
		ID4	0.774			
	Discount information	ID7	0.723	0.912	0.932	0.696
		ID9	0.821			
		ID10	0.832			
		ID11	0.782			
		ID12	0.761			
	Reducing search costs	ID13	0.799	0.850	0.910	0.772
		SC1	0.911			
		SC2	0.916			
	Trust	SC3	0.805	0.933	0.945	0.712
		TR1	0.796			
		TR2	0.813			
		TR3	0.865			
		TR4	0.858			
		TR5	0.851			
		TR6	0.874			
TR7		0.847				
Group-buying intention	GI1	0.846	0.898	0.925	0.711	
	GI2	0.872				
	GI3	0.857				
	GI4	0.871				
	GI5	0.766				

Table III.
Psychometric
properties in the null
model for first-order
constructs

Note: $n = 201$

Construct	Mean	SD	Information disclosure				
			Product/service information	Discount information	Reducing search costs	Trust	Group-buying intention
<i>Information disclosure</i>							
Product/service information	5.942	1.191	0.886				
Discount information	5.694	1.051	0.704	0.834			
Reducing search costs	5.474	1.122	0.521	0.501	0.879		
Trust	4.912	1.214	0.288	0.266	0.474	0.844	
Group-buying intention	5.131	1.064	0.349	0.270	0.680	0.606	0.843

Table IV.
Mean, SD, and
intercorrelations of
the latent variables
for first-order
constructs

Note: Square root of the AVE on the diagonal

Assessing the second-order model of information disclosure	Information disclosure			AVE
	Loading	CA	CR	
Product/service information	0.899	0.933	0.943	0.625
Discount information	0.944			

Table V.
Assessing the
second-order model
of information
disclosure

R^2 measures the relationship of a latent variable's explained variance to its total variance. Values of approximately 0.670 are considered substantial, values around 0.333 are considered average, and values around 0.190 are considered weak (Chin, 1998a, b). Approximately 56.7 percent of the variance in the group-buying intention was accounted for by the variables in the model ($R^2 = 0.567$). The path coefficients ranged from 0.339 to 0.507, exceeding the suggested minimum standard of significance at 0.20 (Chin, 1998a, b), and thus the fit of the overall model was good. The t -value and significance for each path coefficient is shown in Figure 2 and the t -values for all path coefficients are statistically significant at the $\alpha = 0.001$ level. The findings thus supported all the hypotheses at the $p < 0.001$ level.

5. Conclusions

This research aimed to investigate on the relationships among information disclosure, trust, reducing search cost and group-buying intention in the context of group-buying websites. First, it investigated the influence of level of information disclosure on reducing search costs. It then examined the influence of consumer trust in the group-buying website on reducing search costs. Finally, it investigated the influence of reducing search costs and trust in the group-buying website on group-buying intention.

5.1 Theoretical implications

The results show that all the path coefficients of the causal links in the hypothesized model are significant and strong. The variance explained for each factor indicates that, as a group, these predictors are to a certain extent able to explain how the level of information disclosure on a group-buying website affects consumer intentions to make a purchase.

As the hypothesized antecedents of group-buying intention, lower search costs, and higher trust in the group-buying website, have comparable path coefficients with regard to group-buying intention. This result has implications that they are almost equally important in forming consumers' group-buying intentions. The level of information disclosure on a group-buying website has a significantly positive influence with regard to reducing search costs ($b = 0.451$), and similar findings have been reported in other studies (Chen and Lee, 2012; Daft and Lengel, 1984). It is also noteworthy that the path coefficient of reducing search costs to consumer group-buying intention is larger than that of trust, and thus reducing search costs may have a greater effect on group-buying intention than trust. This result has implications that if the group-buying websites can release more information regarding the products and services they offer, and enable consumers to retrieve it quickly and easily, then it is possible to effectively decrease consumer search costs, especially when this information is related to the price, current number of orders, discount period, and so on. This research thus suggests that group-buying websites should disclose more information regarding the products and services they offer, as well as keep all the information up-to-date in order to eliminate information asymmetry and decrease consumer search costs, thus increasing group-buying intentions. The level of trust toward a group-buying website has a significantly positive influence with regard to reducing search costs ($b = 0.339$), consistent with the findings of Teo and Yu (2005). This result also affirms the finding in Lee (2008) that trusting relationships not only prevent frauds, but also decrease search costs, thus reducing overall transaction costs. This result has implications for the higher level of trust that consumers have with

regard to a group-buying website will have a significantly positive influence on reducing search costs. Therefore, this research suggests that group-buying websites should treat consumer demands and feedback in a sincere manner in order to show respect and win their trust, as well as to decrease search costs when trying to find information regarding products or services of interest.

As in Liang and Huang (1998), the current study also finds that reducing search costs contribute significantly to group-buying intentions, with $b = 0.507$. This result has implications that greater reductions in search costs contribute to the formation of more favorable group-buying intentions. This result echoes Li *et al.* (2013) finding that improving information flows and proactively providing consumers with more information related to a purchase will help reduce search costs, and eventually increase purchase intentions. Therefore, this study suggests that group-buying websites should not only provide a stable group-buying platform, but also provide a customized search function in order to meet consumers' personal preferences (e.g. searching by region or category), so that they can quickly find information regarding the products or services they are looking for, thus decreasing search costs and increasing group-buying intention. As in Reichheld and Scheffer (2000), this study finds that trust contributes significantly to group-buying intention, with $b = 0.366$. This result has implications that greater trust in a group-buying website contributes to the formation of a more favorable group-buying intention toward it. This result echoes the findings in Gefen *et al.* (2003) and Palvia (2009), which reported that the level of consumer trust will directly and positively influence purchase decisions on an online store. Therefore, group-buying websites should take consumers' interest into consideration in order to win their trust and enhance their group-buying intention.

5.2 Managerial implications

Online group-buying offers many business opportunities and has considerable growth potential. This research thus applied purposive sampling to collect data from respondents with experience of buying products and services from group-buying websites. Due to the fact that previous studies have not applied a scale to measure information disclosure on group-buying websites, the novelty of the research first attempted to design such a scale, as well as examined how the level of information disclosure and trust on such sites, and the influence of reducing search cost on group-buying intentions. The results showed that the completeness of the information disclosure provided on a group-buying website is not only closely related to consumers' searching costs, but also influences their group-buying decisions. If group-buying vendors would like to attract more consumers to buy products or services online, they should proactively disclose more information. The disclosure to be meaningful, it should be timely, accurate, and informative so that consumers spend less time and effort looking for it, thus reducing search costs. Furthermore, such websites should also work to increase consumer trust in order to enhance their group-buying intentions. In addition, the results indicate that group-buying websites should disclose as much information related to the product or service as possible, such as the dates of the discount period, the difference between the original and discounted prices, current number of orders (including the amount of goods remaining available for sale), and any upcoming discounts or promotional activities. At the same time, it is also crucial to provide consumers with more details regarding the different products and services available in different regions. In order to enhance consumer trust toward the group-buying website, it is suggested that group-buying websites should provide consumers with the most up-to-date and comprehensive details about the products or services they offer in order to establish a positive image and reputation. Such websites can also collaborate with well-known

brands and merchants to increase the exposure of their products and services. In addition, group-buying websites can also setup a platform for famous people or experts to write reviews of the products and services so that consumers can better understand them, thus reducing uncertainty. Finally, group-buying vendors can also establish a discussion forum for consumers. On these, consumers who share their experiences or provide reviews could be given bonus points that can then be used to purchase goods on the group-buying website. In this it is possible to not only better understand the consumers' real needs and opinions, but also increase their re-purchase intentions, thus forming a virtuous cycle that increases sales. In conclusion, by more actively disclosing information it is possible for group-buying websites to also increase consumer trust and decrease search costs, thus enhancing their group-buying intentions.

5.3 Study limitations

This study has three main limitations, as follows. First, previous studies regarding information disclosure focused on the relationship between the transparency of financial reports and investors' investment decisions (Chen *et al.*, 2002; Lambert *et al.*, 2007; Francis *et al.*, 2008), with no works examining information disclosure to an online group-buying context. Therefore, the information disclosure scale used in this study was designed and developed by the authors, and thus the validity of some of the questionnaire items may be less than idea inadequate, and thus future researchers should work to revise this scale. Second, this research applied a purposive sampling method and obtained a fairly adequate number of respondents. However, the results may include some bias, and so future research should apply a random sampling method to collect more responses and increase the generalizability of the findings. Third, this research investigated the relationships among information disclosure, trust, reducing search costs, and group-buying intention in a Taiwanese context that contains a specific set of societal, cultural and linguistic attitudes and behaviors. Therefore, future research could extend this study to other regions of the world.

References

- Abdelkarim, N., Shahin, Y.A. and Arqawi, B.M. (2009), "Investor perception of information disclosed in financial reports of palestine securities exchange listed companies", *Accounting & Taxation*, Vol. 1 No. 1, pp. 45-61.
- Akerlof, G.A. (1970), "The market for 'Lemons': quality uncertainty and the market mechanism", *Quarterly Journal of Economics*, Vol. 84 No. 3, pp. 488-500.
- Anderson, J.C. and Narus, J.A. (1990), "A model of distributor firm and manufacturer firm working partnerships", *Journal of Marketing*, Vol. 54 No. 1, pp. 42-58.
- Bromiley, P. and Cummings, L.L. (1995), "Transactions costs in organizations with trust", *Research on Negotiation in Organization*, Vol. 5 No. 2, pp. 219-247.
- Chen, K.H. and Lee, H.M. (2012), "Effect of dining blog information disclosure on information transmission and purchase intention", *Journal of Tourism and Travel Research*, Vol. 7 No. 2, pp. 21-40 (in Chinese).
- Chen, S., DeFond, M.L. and Park, C.W. (2002), "Voluntary disclosure of balance sheet information in quarterly earnings announcements", *Journal of Accounting and Economics*, Vol. 33 No. 2, pp. 229-251.
- Cheng, H.H. and Huang, S.W. (2013), "Exploring antecedents and consequence of online group-buying intention: an extended perspective on theory of planned behavior", *International Journal of Information Management*, Vol. 33 No. 1, pp. 185-198.

- Chin, W.W. (1998a), "Issues and opinion on structural equation modeling", *MIS Quarterly*, Vol. 22 No. 1, pp. vii-xvi.
- Chin, W.W. (1998b), "The partial least squares approach to structural equation modeling", in Marcoulides, G.A. (Ed.), *Modern Methods for Business Research*, Lawrence Erlbaum Associates, Mahwah, NJ, pp. 259-358.
- Daft, R.L. and Lengel, R.H. (1984), "Information richness: a new approach to managerial behavior and organizational design", in Cummings, L.L. and Staw, B.M. (Eds), *Research in Organizational Behavior*, JAI Press, Homewood, IL, pp. 191-233.
- Dahlman, C.J. (1979), "The problem of externality", *Journal of Law and Economics*, Vol. 22 No. 1, pp. 141-162.
- Dodds, W.B., Monroe, K.B. and Grewal, D. (1991), "Effects of price, brand, and store information on buyers' product evaluations", *Journal of Marketing Research*, Vol. 28 No. 3, pp. 307-319.
- Doney, P.M. and Cannon, J.P. (1997), "An examination of the nature of trust in buyer-seller relationships", *Journal of Marketing*, Vol. 61 No. 2, pp. 35-51.
- Engel, J.F., Blackwell, R.D. and Miniard, P.W. (1995), *Consumer Behavior*, Dryden Press, Chicago, IL.
- Fishbein, M. and Ajzen, I. (1975), *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*, Addison-Wesley, MA, pp. 288-332.
- Fornell, C. and Cha, J. (1994), "Partial least squares", in Bagozzi, R.P. (Ed.), *Advanced Methods of Marketing Research*, Blackwell Publisher, Oxford, pp. 52-78.
- Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.
- Francis, J., Nanda, D. and Olsson, P.E.R. (2008), "Voluntary disclosure, earnings quality, and cost of capital", *Journal of Accounting Research*, Vol. 46 No. 1, pp. 53-99.
- Friedman, J.P., Harris, J.C. and Lindeman, J.B. (2013), *Dictionary of Real Estate Terms*, Barron's Educational Series, New York, NY.
- Gambetta, D. (2000), "Can we trust trust?", in Gambetta, D. (Ed.), *Trust: Making and Breaking Cooperative Relations*, Basil Blackwell, Oxford, pp. 213-237.
- Gefen, D. (2000), "E-commerce: the role of familiarity and trust", *Omega*, Vol. 28 No. 6, pp. 725-737.
- Gefen, D., Karahanna, E. and Straub, D.W. (2003), "Trust and TAM in online shopping: an integrated model", *MIS Quarterly*, Vol. 27 No. 1, pp. 51-90.
- Hosmer, L.T. (1995), "Trust: the connecting link between organizational theory and philosophical ethics", *Academy of Management Review*, Vol. 20 No. 2, pp. 379-403.
- Howard, J.A. and Sheth, J.N. (1969), *The Theory of Buyer Behavior*, John Wiley and Sons, New York, NY.
- 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*, Vol. 35 No. 1, pp. 45-56.
- Hsu, M.H., Chang, C.M., Chu, K.K. and Lee, Y.-J. (2014), "Determinants of repurchase intention in online group-buying: the perspectives of DeLone & McLean IS success model and trust", *Computers in Human Behavior*, Vol. 36, pp. 234-245.
- Hurme, P. (2005), "Mobile communication and work practices in knowledge-based organizations", *An Interdisciplinary Journal on Humans in ICT Environments*, Vol. 1 No. 1, pp. 101-108.
- Joslin, A. (2005), "An investigation into the expression of uncertainty in property valuations", *Journal of Property Investment and Finance*, Vol. 23 No. 3, pp. 269-285.

- Kauffman, R.J. and Wang, B. (2001), "New buyers' arrival under dynamic pricing market microstructure: the case of group-buying discounts on the internet", *Journal of Management Information Systems*, Vol. 18 No. 2, pp. 157-188.
- Keh, H.T. and Xie, Y. (2009), "Corporate reputation and customer behavioral intentions: the roles of trust, identification and commitment", *Industrial Marketing Management*, Vol. 38 No. 7, pp. 732-742.
- Kutlu, A.C. (2012), "Outsourcing contracting strategies from supplier's side: a real options approach based on transaction costs", *Procedia – Social and Behavioral Sciences*, Vol. 58 No. 12, pp. 1601-1610.
- Lambert, R., Leuz, C. and Verrecchia, R.E. (2007), "Accounting information, disclosure, and the cost of capital", *Journal of Accounting Research*, Vol. 45 No. 2, pp. 385-420.
- Lee, C.C. (2008), "An empirical study on the effects of information disclosure, trust and search cost on consumers' intention to authorize the real estate brokerage industry—the example of Kaohsiung city", *Journal of Housing Studies*, Vol. 17 No. 1, pp. 71-104 (in Chinese).
- Li, C.Y., Ku, Y.C. and Lu, S.T. (2013), "Understanding continuance intention of group buying: a perspective of transaction cost theory", *Journal of E-Business*, Vol. 15 No. 4, pp. 491-518 (in Chinese).
- Li, Y.M., Chou, C.L. and Lin, L.F. (2014), "A social recommender mechanism for location-based group commerce", *Information Sciences*, Vol. 274, pp. 125-142.
- Liang, T.P. and Huang, J.S. (1998), "An empirical study on consumer acceptance of products in electronic markets: a transaction cost model", *Decision Support Systems*, Vol. 24 No. 1, pp. 29-43.
- Liebermann, Y. and Flint-Goor, A. (1996), "Message strategy by product-class type: a matching model", *International Journal of research in Marketing*, Vol. 13 No. 3, pp. 237-249.
- Lim, W.M. and Ting, D.H. (2014), "Consumer acceptance and continuance of online group buying", *The Journal of Computer Information Systems*, Vol. 54 No. 3, pp. 87-96.
- Lin, M.Q., Wen, F.H. and Shang, Y.Y. (2011), "A cross level research of the factors on the purchase intention of blog netizens-characteristics of initiators and brand image as moderating variables", *Journal of Information Management*, Vol. 18 No. 4, pp. 21-42 (in Chinese).
- Lincoln, P.C. (1989), "Investor relation: the use's perspective", in Nichols, D.R. (Ed.), *The Handbook of Investor Relations*, Dow Jones and Company, Inc., IL, pp. 52-63.
- Lynch, J.G. and Ariely, D. (2000), "Wine online: search costs affect competition on price, quality, and distribution", *Marketing Science*, Vol. 19 No. 1, pp. 83-103.
- Midgley, D.F. (1983), "Patterns of interpersonal information seeking for the purchase of a symbolic product", *Journal of Marketing Research*, Vol. 20 No. 1, pp. 74-83.
- Nunnally, J.C. and Bernstein, I.H. (1994), *Psychometric Theory*, McGraw-Hill, New York, NY.
- Palvia, P. (2009), "The role of trust in e-commerce relational exchange: a unified model", *Information & Management*, Vol. 46 No. 4, pp. 213-220.
- Pavlou, P.A. (2003), "Consumer acceptance of electronic commerce: integrating trust and risk with the technology acceptance model", *International Journal of Electronic Commerce*, Vol. 7 No. 3, pp. 101-134.
- Pavlou, P.A. and Gefen, D. (2004), "Building effective online marketplaces with institution-based trust", *Information Systems Research*, Vol. 15 No. 1, pp. 37-59.
- Reichheld, F.F. and Scheffer, P. (2000), "E-Loyalty: your secret weapon on the web", *Harvard Business Review*, Vol. 78 No. 4, pp. 105-113.
- Schiffman, L.G. and Kanuk, L.L. (2009), *Consumer Behavior*, prentice Hall International, Inc., NJ, pp. 1-656.

- Shao, C.Y., Baker, J.A. and Wagner, J. (2004), "The effects of appropriateness of service contact personnel dress on customer expectations of service quality and purchase intention", *Journal of Business Research*, Vol. 57 No. 10, pp. 1164-1176.
- Singh, J. and Sirdeshmukh, D. (2000), "Agency and trust mechanisms in consumer satisfaction and loyalty judgments", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 150-167.
- Sirakaya, E. and Woodside, A.G. (2005), "Building and testing theories of decision making by travellers", *Tourism Management*, Vol. 26 No. 6, pp. 815-832.
- Solomon, M.R. (2014), *Consumer Behavior: Buying, Having and Being*, Prentice Hall, pp. 1-654.
- Srinivasan, N. and Ratchford, B.T. (1991), "An empirical test of a model of external search for automobiles", *Journal of Consumer Research*, Vol. 18 No. 2, pp. 233-242.
- Teo, T.S.H. and Yu, Y. (2005), "Online buying behavior: a transaction cost economics perspective", *Omega*, Vol. 33 No. 5, pp. 451-465.
- Tsai, M.T., Cheng, N.C. and Chen, K.S. (2011), "Understanding online group buying intention: the roles of sense of virtual community and technology acceptance factors", *Total Quality Management & Business Excellence*, Vol. 22 No. 10, pp. 1091-1104.
- Maute, M. and Forrester, W. (1991), "The effect of attribute qualities on consumer decision making: a causal model of external information search", *Journal of Economic Psychology*, Vol. 12 No. 4, pp. 643-666.
- Urbach, N. and Ahlemann, F. (2010), "Structural equation modeling in information systems research using partial least squares", *Journal of Information Technology Theory and Application*, Vol. 11 No. 2, pp. 5-40.
- Wu, Y.H., Chu, S.Y. and Fang, W.C. (2008), "An empirical study of trust and TAM-an example of online shopping", *Journal of Information Management*, Vol. 15 No. 1, pp. 123-152 (in Chinese).
- Yoon, S.J. (2002), "The antecedents and consequences of trust in online-purchase decisions", *Journal of Interactive Marketing*, Vol. 16 No. 2, pp. 47-63.
- Zhang, H., Chen, D. and Sun, R. (2010), "The study of consumer trust in C2C e-commerce based on reputation score, information disclosure, online consumer review quality", *10 Proceedings of the 2010 International Conference on Management of e-Commerce and e-Government*, IEEE Computer Society, Washington, DC.

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