ALTRUISM OR BENEFIT SEEKING? EXAMINING THE EFFECTS OF PERSONAL CHARACTERISTICS AND BEHAVIORAL BELIEFS ON ONLINE SHOPPER’S ATTITUDE AND INTENTION TO BE AN ONLINE GROUP BUYING INITIATOR

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Abstract

Among the various online shopping business models, one that specifically attracts the attention of Internet users is “online group buying, which is characterized by group negotiation benefits and online word-of-mouth effects. Extant online group buying research has examined topics covering pricing mechanisms, pricing models, sales performance, and online users’ motivation to participation. Whereas online group buying requires close collaboration among the group buying website, the supplier, the initiator, and the participants, little attention has been paid on the role of the initiator. This study investigates the antecedents of behavioral intention of online group buying initiators from the social exchange theory perspective. The aim is to understand the influence of social exchange factors and the effects of cognitive psychology determinants on the behavioral intention to be an online group buying initiator. This study employed an online survey method, in which a total of 428 valid responses were acquired. Results indicated that self-efficacy, altruism, perceived benefits, and perceived risks significantly affect the attitude toward being an online group buying initiator. Moreover, perceived behavioral control, subjective norm, and attitude positively affect the behavioral intention to be an online group buying initiator. Further analysis also showed that the experience of being an online group buying initiator plays an important moderating role on certain paths between research constructs. For Internet users who had experience in being online group buying initiators, altruism positively and perceived risks negatively affect attitude. In addition, subjective norm positively influences the behavioral intention to be online group buying initiators for inexperienced Internet users. Besides the discussion of research findings, we offer suggested directions for future research.

Keywords: Online group buying, online group buying initiator, altruism.
1 INTRODUCTION

The openness of the Internet allows online group buying to enjoy the elimination of time-space constraint and benefit from positive network externalities. On the one hand, consumers can increase their bargaining power and obtain volume discounts much easier through teaming up with other buyers who share the same need or interest toward particular products or services (Rezabakhsh et al. 2006). On the other hand, suppliers can reduce marketing costs and transaction costs spent on searching and contacting their customers in the online group buying business. Such win-win situation maximizes the aggregated social welfare because each party becomes better off than they would be in the absence of the online group buying model (Kauffman et al. 2010a).

Online group buying has shown its huge market potential in Taiwan. Many online communities and platforms in Taiwan provide or support online group buying services. Examples include the BuyTogether board in PTT (ptt.cc, the largest electronic bulletin board in Taiwan), ihergo (www.ihergo.com), BabyHome (www.babyhome.com.tw), GOMAJI (www.gomaji.com) and Groupon (www.groupon.com.tw). In PTT’s BuyTogether board alone, there is a weekly average of over 2,600 posts in 2012 and 2013 that solicit online group buying participants. The group buying market size in Taiwan was as big as NT$410 million as of August, 2012 (GoodLife 2012). (US$1 is equal to approximately NT$30.)

Prior research on online group buying has investigated topics that include: (1) the influence of pricing model on sales performance. For example, based upon information economics and operation management models, Anand and Aron (2003) compared the possible profits of different pricing mechanisms under the scenario of online group buying where demand was uncertain; (2) perception factors affecting consumers’ participation in group buying. For instance, Kauffman et al. (2010a) examined the effects of perceived fairness and incentive mechanism on consumers’ intentions to participate in online group buying, and Kauffman et al. (2010b) investigated factors influencing consumers’ willingness to join online group buying, such as word-of-mouth, psychological and financial risks, and trust in the initiator; (3) consumer participation in group buying. Kauffman and Wang (2001) performed an economic analysis on consumer behaviors and the level of participation under the dynamic pricing models of group buying websites. Kauffman et al. (2010a) explored the effect of incentive mechanism and fairness on consumers’ intentions for group bidding and participation behavior. While these topics covered the roles of the group buying platform, the supplier, and the group buying participants, one would find that none of them discussed the key role played by the initiator, leaving a gap in online group buying research.

The initiator plays an indispensable and pivotal role to the operation of online group buying, especially in buyer-initiated group buying. He or she is in charge of contacting the supplier, bargaining, integrating orders, confirming shipment, receiving products, collecting payments, and shipping the received products (In some circumstances it may be the supplier who ships the products directly to the group members.) In some cases, however, initiators also have to bear the risk of members not paying or of the supplier not carrying out the agreement, and therefore may need to absorb the laboring cost and the time incurred during the whole process. In addition, although most group members benefit from the discount resulting from group buying, the initiator has to spend extra time and effort throughout the process to ensure smooth operation of the group. With little (e.g., free shipping) or even no benefit involved, why would some people willingly to serve as the initiator? Apparently, this phenomenon cannot be explained solely by economic incentives.

Online group buying participants form groups through the Internet, aiming to lower purchasing costs or to increase convenience in making a purchase. Within this group, members exchange product information, share reviews, and invite other buyers who intend to purchase the same products. As these participants form a group of people with common objective and interests, they can also be seen as a type of virtual community (Lechner and Hummel, 2002; Koh and Kim, 2003-4). According to Homans (1958), every interpersonal interaction can be considered a type of exchange behavior and,
more or less, bears the implications of reward and cost throughout the process. Moreover, the cost may involve risks in the exchange process. Within the community formed for the purpose of online group buying, the initiator contributes his or her effort and time during the group buying process while the members and the supplier respond to his or her devotion. Tangible responses to such altruistic behavior can be a small amount of handling fee on each group buying order as a token of appreciation for the service provided by the initiator, or a gift or extra discount from the supplier. Intangible responses can be a thank-you posting or positive review from the members, which also reflects the interactions and exchange behaviors between the initiator and the members. This phenomenon reveals a process of “social exchange” that affects one’s motivation to act and one’s self-efficacy to devote oneself in the role of online group buying initiator.

This study intends to fill in this missing piece in past research to further understand initiators’ intentions to participate in online group buying. Besides considering the influence of attitudinal beliefs of self-efficacy, altruism, perceived benefits, and perceived risks, this study also examines the moderating effect of past experience with being group buying initiators on the structural model in an exploratory sense. The three objectives of this research are: First, prior research on online group buying did not pay sufficient attention to the role of the initiator. This study attempts to fill this research gap in order to further our understanding regarding the formation of online group buying and its operation. Second, the current study intends to better understand factors that shape online group buying shoppers’ intention to take on the role of an initiator. Third, we hope that the results of this study can provide valuable insights for online group buying platforms in the development of their business strategies. The implications may help them make the strategic choice between the development of a supplier-dominated or buyer-dominated mode of group buying and facilitate the interactions between the supplier and the initiator as well as between the members and the initiator. The platforms can then strengthen their roles and value as a key intermediary in online group buying.

2 LITERATURE REVIEW

2.1 Self-efficacy

Self-efficacy is one of the core concepts of the social learning theory and is defined as whether a person has the ability to complete certain jobs or tasks (Bandura 1977). It is an evaluation of one’s ability in carrying out a series of tasks necessary for accomplishing a particular mission (Bandura 1986). A person’s belief in his or her own self-efficacy determines the intensity of his or her motivation and is highly related to his or her performance. In other words, self-efficacy can be seen as one’s evaluation of the difficulty and confidence in his or her own ability to execute a particular behavior (Ajzen 2002; Terry and O’Leary 1995). Self-efficacy is not only an ability judgment derived from one’s accumulated experiences and performances from the past but also an important factor that shapes future behavior (Wood and Bandura 1989). Broadhead-Fearn and White (2006) integrated self-efficacy with the theory of planned behavior to examined rule-abiding behaviors in an adolescent shelter. They concluded that self-efficacy is an individual’s confidence in his or her own ability and self-fulfillment and predicts one’s behavioral intention. Therefore, an individual’s self-efficacy will influence his or her evaluation on acting as a online group buying initiator. One’s belief that he or she lacks the ability to be an initiator may result in a lowered confidence in performing such behavior.

2.2 Altruism

Altruism refers to an individual behaving in a way that benefits others. Shaffer (1994) considered altruistic behavior as the act of benefitting others, no matter what one’s motivation is. Some people are born with benevolence and are willing to share with others without asking for anything in return (Davenport and Prusak 1988). Morgan and Miller (2002) indicated that an altruistic person tends to believe in and help others, and is more willing to become an organ donor. Additionally, when being altruistic, there could also be an intrinsic benefit. For instance, one would feel content about oneself
during the process of enhancing the satisfaction of others (Singer 1989). The motivation behind altruism, however, might not necessarily come without selfish considerations. It is always possible for individual behaviors to come with personal concerns. The key to altruism is whether one considers the welfare of others during the process.

During online interactions, even though many participants are strangers to each other, it is through this online platform that altruistic behaviors and connections are established. A good example took place during the 2009 disaster caused by Typhoon Morakot. Internet users voluntarily created the “Map of Areas affected by Typhoon Morakot” (http://www.wretch.cc/blog/billypan101/16015964) through the Google My Map platform. Volunteers and solicitous users kept updating the latest information and were able to disseminate and integrate disaster-relief information in a timely fashion. In the context of online group buying, the initiator acts as the contributor in charge of offering product information, withholding products and payments, contacting the supplier and members, and integrating orders. Members thus are beneficiaries who receive the help or service provided by the initiator. One can therefore consider taking on the role of the initiator in online group buying as altruistic because the initiator offers services that benefit group buying members under the condition of minimal or even no rewards. Therefore, this research regards altruism as an important characteristic of online group buying initiators.

2.3 Perceived Benefits

Perceived benefits are the benefits one receives during his or her engagement in certain behavior (Compeau et al. 1999). Past research categorized benefits through the distinction between internal/intangible and external/tangible benefits. The internal/intangible benefits include success, fulfillment, self-esteem, unofficial praise, work satisfaction, status, power, and self-development. In contrast, the external/tangible benefits may be official honor, welfare, bonus, promotion, social relations and work environment (Carnell and Kuzmits 1982; Robbins 1998). According to the social exchange theory (Blau 1964; Homans 1961), people expect to receive benefits or rewards during the interaction with others, and such tangible or intangible benefits one receives during the exchange process motive him/her to maintain the exchange behavior. Thus, when a person perceives the opportunity to obtain valuable benefits (possible forms include respect, approval, and positive evaluation) in an exchange, he or she would have stronger motivation to actively participate in the behavior. This assertion has been empirically confirmed by previous research. For example, Lee et al. (2006) found that virtual community members who anticipate information sharing would establish good image tend to be more willing to share. Song and Walden’s (2007) also pointed out that when one expects to receive benefits or rewards by sharing information through P2P (Peer to peer) technologies, the intention to use the technology will be higher. Accordingly, perceived benefits play an important role in determining one’s behavioral intention. This study thus investigates whether and how one’s perceived benefits from serving as the initiator of group buying influence the intention to become an initiator.

2.4 Perceived Risks

The uncertainties involved with consumers’ shopping behavior (e.g., unpleasant interaction or delayed delivery) are a type of risks for consumers. The perceived risks represent one’s subjective expectation of possible losses during the pursuit for a particular outcome (Featherman and Pavlou 2003).

In the online shopping context, the presence of perceived risks negatively impact consumers’ purchase intentions (Liebermann and Stashefsky 2002). Prior research also indicated that perceived risks may reduce consumers’ online purchase intentions (Jarvenpaa et al 2000; Pavlou 2002; Pavlou and Gefen 2004). In addition, the lack of opportunities for consumers to try out and personally experience the products in non-store shopping contexts also causes higher perceived risks than in traditional physical stores (McCorkle 1990; Solomon 1992).
Online group buying initiators play the dual roles of consumers as well as group buying organizers. As a consumer, he or she would undertake the same perceived risks as other group buying members. Yet, as an initiator, he or she must bear extra risks involved in the transaction. The current study focuses on the role of initiators and therefore defines perceived risks as the negative perceptions an initiator possesses due to the uncertainty, disadvantage, or harm that might exist during the process of online group buying transactions.

2.5 Attitude, Subjective Norm, Perceived Behavioral Control, and Behavioral Intention

The theory of planned behavior is based on volitional control of one’s behavior and suggests that attitude and subjective norm predict and explain one’s behavioral intentions and actual behaviors. Attitude is one’s predisposition to respond in a favorable or unfavorable manner toward people, events, objects, or behaviors, and subjective norm refers to “the perceived social pressure to perform or not to perform the behavior” under study (p. 188, Ajzen 1991). Besides the influences of attitude and subject norm, behavioral intention will also be affected by perceived behavioral control, which indicates the level of influence of external resources. When one perceives rich resources and opportunities for a particular behavior, he or she will have higher controllability on that behavior and thus higher intention to perform that behavior, indicating positive effects of perceived behavioral control.

The theory of planned behavior has been widely applied in various research contexts. Elliott (2010) integrated the theory of planned behavior and social identity theory to explore motorcyclists’ intentions to speed, and Liao et al (2010) investigated the use of pirated software by combining perceived risks with the theory of planned behavior. Because of the important role of attitude, subjective norm, and perceived behavioral control in shaping one’s behavioral intention, the current study incorporate these constructs into the research model so as to examine factors that influence one’s intention to be an online group buying initiator.

3 RESEARCH METHODOLOGY

This study derives the research model based on the discussion presented in previous sections. In the current section, we first show the research model that depicts the causal relationships among research constructs. We then proceed with developing research hypotheses that support the causal relationships and presenting the definition and operationalization of research constructs. Data collection and analysis procedures are described at the end of this section.

3.1 Research Model and Hypotheses Development

The interactive stimulus with others affects one’s behavior (Bock and Kim 2002). Within the context of group buying, it is the initiator’s job to interact with other members and suppliers to carry out the entire group buying process. The literature review presented previously suggests that being an initiator of online group buying is a behavior involving specific personal characteristics and behavioral beliefs. Thus, this study constructs a research model with self-efficacy, altruism, perceived benefits, and perceived risks serving as the antecedents of attitude toward being an online group buying initiator. The research model is shown in Figure 1. Further, we posit that attitude, subjective norm, and perceived behavioral control are three direct antecedents of behavioral intention.
As suggested by the theory of planned behavior, one’s behavior is determined by the behavioral intention, to which attitude toward the behavior, subjective norm, and perceived behavioral control serve as antecedents (Ajzen 1985). Prior studies have supported the influences of attitude, subjective norm, and perceived behavioral control on behavioral intention in the context of information technology adoption (e.g., Taylor and Todd 1995a; Taylor and Todd 1995b).

The current study also deals with information technology adoption issue because online group buying initiators have to adopt a particular type of online group buying platforms, such as a BBS or a website, to complete the group buying process. Therefore, if one has positive feeling or evaluation toward being an online group buying initiator, he or she will have higher behavioral intention. Support from important others indicates the effect of subjective norm on behavioral intention. In addition, because perceived behavioral control refers to the level of difficulty one perceives to engage in certain behavior (Ajzen 1991), believing in oneself as having the resources and opportunities to engage in the behavior (i.e., being an initiator) means he or she has greater perceived behavioral control in this particular act. In other words, one will have higher intention to become an online group buying initiator. The effects of attitude, subjective norm, and perceived behavioral control on behavioral intention in the online context have also been supported by prior studies (George 2004; Lee 2009; Merikivi and Mantymaki 2009). We thus propose H1 through H3 as follows:

H1: One’s attitude toward being an online group buying initiator positively influences one’s behavioral intention to become an initiator.

H2: One’s subjective norm toward being an online group buying initiator positively influences one’s behavioral intention to become an initiator.

H3: One’s perceived behavioral control toward being an online group buying initiator positively influences one’s behavioral intention to become an initiator.

Self-efficacy is one’s judgment on whether one has the ability to complete a particular job or task (Bandura 1977). It can be used to evaluate one’s confidence in having the ability to carry out a particular behavior or to achieve self-fulfillment (Ajzen 2002). Self-efficacy is considered an antecedent that can be used to predict one’s behavior (Terry and O’Leary 1995). Based upon the social cognition theory, Hsu et al. (2007) explored the influence of self-efficacy on knowledge-sharing behavior in a virtual community. Gangadharbutala (2008) investigated the effect of self-efficacy on one’s attitude and willingness toward participation in social networking sites. Because the evaluation of self-efficacy represents one’s confidence level in engaging in a particular behavior (e.g., being an online group buying initiator), higher self-efficacy comes with stronger confidence for one to be an initiator, positively affecting his or her attitude toward taking on such role. This study therefore proposes H4 as follows:

H4: One’s self-efficacy toward being an online group buying initiator positively influences one’s attitude toward being an initiator.

Altruism, in a broad sense, refers to a person acting in ways that benefit others, while asking for nothing in return or not obtaining physical return from others. Altruism is a common phenomenon in
our daily life. Although people may hope for mutual benefits, they might not expect to receive significant return (rewards) (Blau 1964). Altruism is also a way to demonstrate one’s commitment in interpersonal relationships. Prior research has indicted that altruistic people have higher tendencies to share information (Palmer 1991). In research on work value and work behavior, altruism is regarded as a kind of value that positively leads to work attitude (Chaney 1968). Moreover, people with altruistic characteristics were found to be more willing to contribute to non-profit activities, such as open-source software (Haruvy et al. 2003).

As indicated by previous altruism research, one distinguishing characteristic of an altruistic person is that he or she has higher tendency to lend a helping hand to others without asking for actual benefits in return. Charitable contributions and volunteer services are activities of this nature. Because online group buying initiators usually voluntarily provide service for nothing in return and only enjoy meager benefits (such as free shipping), they are performing altruistic behaviors. This study thus suggests that one’s attitude toward becoming an online group buying initiator should be associated with whether he or she is an altruistic person. That is, if one has strong altruistic traits, he or she would be more positive about serving as an initiator. Therefore, H5 is proposed as follows:

H5: Altruism in a person positively influences one’s attitude toward being an online group buying initiator.

Perceived benefits refer to the benefits one earns from engaging in a particular behavior (Compeau et al. 1999) and may come in various forms such as tangible/intangible benefits and internal/external benefits. From the perspective of the social exchange theory, perceived benefits are an incentive for one to maintain participation in an exchange behavior. If one perceives benefits in the exchange process, he or she will become more active as a participant (Blau 1964). Prior research on social exchange theory has used the concept of perceived benefits to explain knowledge sharing behaviors. It was found that if one believes the contribution of his or her knowledge would fulfill one’s expectation, the perceived benefits would have positive influence on the attitude toward the sharing behavior (Kankanhalli et al. 2005). Moreover, in the context of virtual community, if its members believe that sharing information with others would bring themselves intangible benefits (such as good image on themselves), they tend to be more willing to engage in information sharing behaviors (Lee et al. 2006).

A common finding in the relevant literature as discussed above is that people tend to have more positive attitudes toward a particular behavior if they perceive higher benefits in conducting that behavior. Accordingly, this study argues that one would have a more favorable attitude toward taking on the role of an initiator if he or she perceives higher benefits in organizing the online group buying activities. We thus propose H6 as follows:

H6: One’s perceived benefits in being an online group buying initiator have a positive influence on one’s attitude toward being an initiator.

With the popularity of e-commerce, online shopping has become deeply involved in our daily lives. However, the difference between physical and online transactions still needs to be noted. For example, one significant difference is that unlike what consumers usually do in physical channels, they are unable to experience the products in online stores. Such inconvenience of non-store channels causes higher risks for consumers when compared to making transactions in physical channels (Forsythe and Shi 2003; Lim 2003).

The initiator plays a dual role in online group buying. Besides being a consumer, the initiator is also the convener of the group buying transaction. Therefore, the risks perceived by the initiator might not be the same as those perceived by the consumers. That is, other than perceiving the risks a consumer might have to bear (e.g., Hsu et al. 2014; Kauffman et al. 2010b), the role as a convener also brings an initiator other potential risks such as the merchants’ not being able to fulfill the orders in time, unsatisfactory product quality, the members’ backing out (e.g., last minute cancellation), and unreasonable requests from the members that may increase the complexity of the initiator’s job. Defining perceived risks as the level of risks perceived by the initiator throughout the entire process of
handling the online group buying transaction, this study hypothesizes that when one perceives greater risks in being an initiator, one’s attitude toward taking on such role would become more negative.

H7: One’s perceived risks in being an online group buying initiator have a negative influence on one’s attitude toward being an initiator.

3.2 Operationalization and Questionnaire Design

3.2.1 Construct Definition and Measurement

There are eight constructs in the research model, namely self-efficacy, altruism, perceived benefits, perceived risks, perceived behavioral control, subjective norm, attitude, and behavioral intention. These constructs were defined and operationalized based on prior research, with proper adaptations to fit our research context. Seven-point Likert scales were used to measure the respondents’ agreement with each item, with 1 meaning completely disagree and 7 meaning completely agree.

This study adapted the scales from Taylor and Todd (1995a) to measure the behavioral intention to serve as an online group buying initiator. Attitude is one’s positive or negative evaluation on serving as an online group buying initiator and was measured using items from Taylor and Todd (1995b). Perceived behavioral control refers to one’s perceived ability and level of control toward being an online group buying initiator. The items used to measure perceived behavioral control were adapted from Taylor and Todd (1995b). Subjective norm is the pressure one perceives from important others when serving as an online group buying initiator and was also measured using items from Taylor and Todd (1995b) with proper modifications to suit the context of the current study. Self-efficacy refers to one’s evaluation on his or her own ability to carry out a series of tasks to reach a certain outcome (Bandura 1977; Bandura 1986). The items to measure self-efficacy were modified from Zhang and Schwarzer (1995). Altruism suggests that not all human decisions are based upon gaining benefits for oneself. Some people are born to be Samaritans who are willing to share and help others while not asking for any benefits in return (Davenport and Prusak 1988). The items to measure altruism were adapted from Morgan and Miller (2002) to measure the extent one is inclined to help others without asking for return. The benefits one perceives to receive through an exchange serve as the incentive for maintaining the exchange behavior (Blau 1964). This study measures the perceived benefits one receives through serving as an online group buying initiator by using items adapted from Song and Walden (2007). Perceived risks refer to the uncertainty or loss from unfavorable or harmful outcomes one perceives when serving as an online group buying initiator. The items that measure perceived risks were adapted from Pavlou and Gefen (2005).

3.2.2 Pretest

To ensure that the questionnaire items were properly phrased and to discover room for improvement, we followed a three-step process for the design of the questionnaire. First, we performed focused interviews with experienced online group buying initiators. The initiators were asked to respond to open-ended questions such as “What motivated you to become an online group buying initiator at the beginning?” “What troublesome matters did you experience during the process of being an initiator?” “Were there things that delighted you during the process of being an initiator?” to assist directing the development of the questionnaire. Second, the authors continued with a number of research meetings to finalize the questionnaire. Third, thirty-two valid pretest questionnaires were collected. The only difference between the questionnaire for the pretest and that for the formal survey was that the pretest respondents were asked to leave their comments regarding questionnaire design in the last page of the questionnaire. Such feedback was summarized for further amendments to the questionnaire to ensure the appropriateness of the wording and phrasing of the questionnaire items.
3.2.3 Data Collection

This study investigates factors that affect one’s behavioral intention to become an online group buying initiator. Consequently, an online mode of data collection was deemed adequate, and online group buying participants constitute the targets for data collection in the current study.

The announcement for the online survey was distributed through the BuyTogether and Chat82gether discussion boards in PTT, the largest bulletin board system in Taiwan, as well as popular online group buying websites such as ihergo, AHHA, and GoBASing. The respondents who completed all items in the questionnaire were entitled to enter a lottery for cash coupons for a chain convenience store.

The survey was open for two weeks and received 458 responses. Invalid responses were filtered in two ways. The first step was to check the respondents’ E-mail and IP address to identify duplicated participation in the survey. The second step was to check for questionable answers through the use of negatively worded questions. A total of 428 valid responses remained after filtering out those invalid. The valid response rate was thus 93.4 percent.

4 DATA ANALYSIS

4.1 Respondent Characteristics

The valid respondents contained 295 females (68.9 percent) and 133 males (31.1 percent). The age distribution was mainly between 19 to 23 years old (183 respondents, 42.8 percent), followed by the range between 24 and 28 years old (172 respondents, 40.2 percent). In terms of level of education, there were 121 respondents with a graduate degree (28.3 percent) and 297 respondents with a college degree (69.4 percent). The rest, only 10 respondents (2.3 percent), were ones who did not attend college. The distribution of average monthly income showed that 135 respondents (31.5 percent) were in the range between NT$5,001 and NT$10,000, 115 respondents (26.9 percent) between NT$20,001 to NT$40,000, and 87 respondents (20.3%) under NT$5,000 (US$1 is approximately NT$30). Slightly over half of the respondents (50.5 percent) had the experience of being an online group buying initiator in the past two years. Among the experienced respondents, 8.2 percent had been an initiator for more than 11 times, 4.7 percent served 7 to 10 times, 11.0 percent served 4 to 6 times, 10.7 percent served 2 to 3 times, and 9.3 percent served only once. In addition, the top three favorite group buying platforms for the experienced initiators were PTT (44.3 percent), ihergo (14.6 percent), and personal blog (10.6 percent), respectively. When it came to group buying products, food and local specialties attracted the most respondents’ interests in serving as an initiator for (28.2 percent). The next two popular categories were cosmetics (20.1 percent) and fine fashion goods (17.2 percent), whereas online gaming time was the least popular (0.6%). This ranking probably had to do with the discount available for buyers through online group buying.

4.2 Measurement Model Analysis

All Cronbach’s \( \alpha \) and the composite reliability values of the constructs were above 0.8 (see Table 2), surpassing the recommended value 0.7 (Hair et al. 1998; Nunnally 1978). Such evidence demonstrated acceptable internal consistency.

<table>
<thead>
<tr>
<th>Construct</th>
<th>AVE</th>
<th>Cronbach’s ( \alpha )</th>
<th>Composite Reliability</th>
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<tr>
<td>SE</td>
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<td>0.92</td>
<td>0.92</td>
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<tr>
<td>AL</td>
<td>0.72</td>
<td>0.85</td>
<td>0.88</td>
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<tr>
<td>PB</td>
<td>0.79</td>
<td>0.91</td>
<td>0.92</td>
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<tr>
<td>PR</td>
<td>0.76</td>
<td>0.88</td>
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<tr>
<td>PBC</td>
<td>0.89</td>
<td>0.95</td>
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<td>SN</td>
<td>0.88</td>
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Convergent validity requires that each item loads higher than 0.5 on the associated construct (Nunnally 1978). All the factor loadings in the measurement model fell between 0.75 and 0.98. The average variance extracted (AVE) values for all constructs ranged from 0.67 to 0.94 and were higher than the suggested threshold value of 0.5 (Fornell and Larcker 1981). Therefore, the convergent validity was deemed adequate.

Discriminant validity examines how well the constructs are able to differentiate from each other and can be assessed by whether the square root of the AVE value of a construct is larger than the correlation coefficients with other constructs (Chin 1998; Fornell and Larcker 1981). Table 3 shows the correlation matrix of the constructs in this study. The diagonal shows the square root of the AVE values. Because all the square root values were larger than the correlation coefficients, the discriminant validity was supported.

### Table 3. Correlation Matrix of Research Constructs

<table>
<thead>
<tr>
<th></th>
<th>SE</th>
<th>AL</th>
<th>PB</th>
<th>PR</th>
<th>PBC</th>
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<th>BI</th>
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<td>AL</td>
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<tr>
<td>PB</td>
<td>0.23</td>
<td>0.20</td>
<td>0.89</td>
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<tr>
<td>PR</td>
<td>0.11</td>
<td>0.07</td>
<td>0.17</td>
<td>0.87</td>
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<tr>
<td>PBC</td>
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<td>0.33</td>
<td>0.13</td>
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<td>0.35</td>
<td>0.32</td>
<td>0.30</td>
<td>0.04</td>
<td>0.46</td>
<td>0.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT</td>
<td>0.46</td>
<td>0.42</td>
<td>0.36</td>
<td>-0.03</td>
<td>0.52</td>
<td>0.46</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td>BI</td>
<td>0.39</td>
<td>0.39</td>
<td>0.26</td>
<td>-0.02</td>
<td>0.63</td>
<td>0.52</td>
<td>0.70</td>
<td>0.97</td>
</tr>
</tbody>
</table>

SE: self-efficacy; AL: altruism; PB: perceived benefits; PR: perceived risks; PBC: perceived behavioral control; SN: subjective norm; AT: attitude; BI: behavioral intention

Note: Diagonal items are the square root of the AVE, and off-diagonal items are the correlations between constructs.

### 4.3 Structural Model Analysis

LISREL was used for the structural model analysis. The result showed a $\chi^2$/df value of 3.41, which was smaller than the suggested value of 5 (Bollen 1989). GFI (Goodness of Fit Index) and AGFI (Adjusted Goodness of Fit Index) values over 0.8 are considered acceptable (Scott 1994), and both values in this study met the criteria (GFI = 0.86 and AGFI = 0.82). The RMSEA (Root Mean Square Error of Approximation) value of this study was 0.073 and therefore met the Bagozzi and Yi’s (1988) and Browne and Cudeck’s (1993) suggestion that RMSEA should be smaller than 0.08. As for the fit indexes of NFI (Normed Fit Index), NNFI (Non-Normed Incremental Fit Index), IFI (Incremental Fit Index), and CFI (Comparative Fit Index), the structural model showed a satisfactory result of NFI = 0.96, NNFI = 0.97, IFI = 0.97, and CFI = 0.97, all larger than the suggested value of 0.9 and thus presented satisfactory model fit (Bentler and Bonett 1980).

The path coefficients and the corresponding $t$-statistics are shown in Figure 2. Both direct and indirect effects can be calculated to reflect the relationships among the research constructs. For direct effects, self-efficacy ($\beta = 0.26$, $p < 0.001$), altruism ($\beta = 0.13$, $p < 0.05$), and perceived benefits ($\beta = 0.46$, $p < 0.001$) have positive impacts on attitude, whereas the impact of perceived risks ($\beta = -0.09$, $p < 0.05$) is negative. Perceived behavioral control ($\beta = 0.30$, $p < 0.001$), attitude ($\beta = 0.61$, $p < 0.001$), and subjective norm ($\beta = 0.11$, $p < 0.01$) have positive influences on behavioral intention.
Figure 2. Structural Model Analysis

As for the indirect effects, the influences of self-efficacy, altruism, perceived benefits, and perceived risks on behavioral intention are mediated by attitude. The magnitude of the indirect effects can be calculated as $0.26 \times 0.61 = 0.16$, $0.13 \times 0.61 = 0.08$, $0.46 \times 0.61 = 0.28$, and -$0.09 \times 0.61 = -0.05$, respectively.

$R^2$ value represents the amount of variances in a dependent variable that is explained by the independent variables. As shown in Figure 2, self-efficacy, altruism, perceived benefits, and perceived risks explain 47 percent of the variance in attitude, and perceived behavioral control, subjective norm, and attitude explain 49 percent of the variance in behavioral intention.

Based on the results above, all the hypotheses, H1 through H7, are supported by the empirical analysis.

4.4 Multigroup Comparison by Experience

As indicated in Section 4.1, over half of the respondents had the experience being an online group buying initiator in the past two years. Although consumer experience plays an important role in online shopping (Elliot and Fowell, 2000; Park and Stoel 2005; Yoh, 1999), prior research lacks sufficient discussion on how it affects the behavioral intention. We thus performed multigroup analysis in an exploratory sense to uncover the possible influence of experience. The respondents were divided into two groups, with the first group consisting of 212 respondents who did not have the experience of being an initiator, and the second group consisting of 216 respondents who had such experience. The multigroup analysis allowed us to uncover whether the two groups differ in the determinants of the behavioral intention to become an online group buying initiator.

We followed Byrne’s (2006) procedure to perform the multigroup analysis. The experienced group was considered the calibration sample and the inexperienced group was considered the validation sample. The results for testing for multigroup invariance of the structural model are shown in Figure 3 and 4.

Figure 3. The structural model of respondents without initiator experience
Three major findings are available from the analysis. First, the two groups differed in the causal relationship between subjective norm and behavioral intention. For those who had no experience in being an online group buying initiator, the behavioral intentions were more likely to be positively affected by subjective norm ($\beta = 0.16$, $p < 0.01$). In contrast, such effect was insignificant for the experienced group. Such finding indicates that inexperienced respondents tend to be influenced by others surrounding them on the decision to become an online group buying initiator. Second, the two groups also differed in terms of the effect of altruism on attitude. For the experienced respondents, altruism had a positive influence on attitude toward being an initiator ($\beta = 0.16$, $p < 0.05$), whereas such effect was insignificant for the inexperienced respondents. Third, as shown in Figure 4, perceived risks had a negative influence on attitude in the experienced group ($\beta = -0.11$, $p < 0.05$), indicating that these participants were well aware of the risks involved in being an initiator. As for the inexperienced respondents, perceived risks did not have a significant effect on attitude.

5 DISCUSSION

The current study investigates how self-efficacy, altruism, perceived benefits, perceived risks, perceived behavioral control, subjective norm, and attitude affect one’s behavioral intention to become an online group buying initiator. From the perspective of the social exchange theory, exchange involves continuous interactions between people for giving and taking, and people pay costs and earn rewards during the interactions of exchange. The concept of exchange has been widely adopted for the discussion of a variety of human behavior in prior literature. For example, Kankanahalli et al. (2005) investigated the role of self-efficacy, altruism, and perceived benefits as antecedents of one’s knowledge contribution behavior. Researchers have generally supported the positive influence of altruism on people’s engagement in particular exchange behavior (Wichardt, 2009).

Other researchers have also investigated the influence of perceived benefits on human behaviors. Perceived benefits are generally viewed as an important motivating factor that leads to behavior (Lee et al., 2006; Song and Walden, 2007). On the contrary, risks would have negative effects on one’s behavioral intention (Liebermann and Stashevsky, 2002). Such negative impact has been supported in online purchasing studies (Jarvenpaa et al., 2000; Pavlou, 2002; Pavlou and Gefen, 2004).

In the context of online group buying, the initiator is the primary actor who disseminates online group buying information, consolidates purchase orders, collects and transfers member payments, and communicates between suppliers and members. The members are therefore beneficiaries of the initiator’s service. Receiving none or little benefit in return, being an initiator is basically altruistic in nature, as indicated by the positive relationship between altruism and attitude toward being an initiator. Our results also show that one’s judgment on whether he or she has the ability to be an initiator and his or her perceived benefits and risks regarding the role of an initiator jointly determine attitude and behavioral intention.

The findings also demonstrate that one’s perceived difficulty regarding the knowledge, ability, and external resources in being an online group buying initiator and the perception of important others on
such act determine his or her behavioral intention. In addition, the path coefficients in Figure 2 reveal that the influence of attitude (0.61) is stronger than perceived behavioral control (0.30) and subjective norm (0.11).

6 CONCLUSION

In sum, this study comes with three major conclusions. First, one’s attitude toward being an online group buying initiator is determined by self-efficacy, altruism, perceived benefits, and perceived risks. When one perceives higher levels of self-efficacy, altruism, and benefits in serving as an initiator, he or she would have a more positive attitude toward taking up the role. Second, perceived behavioral control, subjective norm, and attitude jointly affects one’s behavioral intention to become an initiator. Third, because our sample contained respondents with and without experiences in serving as an initiator, a multigroup comparison was carried out to further clarify the factors that affect one’s decision to become an initiator. The comparison showed that for those with experiences, their attitude toward being an initiator was influenced by altruism and perceived risks, and subjective norm showed no significant influence on the behavioral intention. In contrast, altruism and perceived risks had no significant influence on attitude for inexperienced respondents, whereas the opinions of important others was more influential in shaping the behavioral intention when it comes to making the decision of whether to become an initiator. Such difference suggests that experienced respondents, who often have good understanding of group buying, tend to devote their time and effort to serve others while having the risks involved carefully evaluated.

The result of the multigroup comparison also suggests important practical meanings. For example, when catering a group buying event to experienced initiators, besides emphasizing the convenience of the group buying platform that supports the dedicated initiator to conveniently organize group buying services, one could also note the advantage of the platform in participant filtering, reliability for convenient communication, and support for convenient payment management. These features effectively lower the risks for the initiator. As for those without initiator experiences, the rapid spread of positive online word-of-mouth through the Internet communities would attract them to participate either as a member or as an initiator (Kauffman et al. 2010b; Wei et al. 2011).

Additionally, prior studies on online group buying primarily focused on pricing models and members’ motivations for participation (e.g., Shiau and Luo 2012). Even though the topics investigated covered the operating mechanism of group buying and the viewpoints of both suppliers and members, the perspective of initiators that may determine the success of online group buying transactions was rarely examined. The current study attempts to fill this gap to enrich the body of knowledge on online group buying. Drawing on the social exchange theory, cognitive and psychological factors were incorporated into the research model to investigate their impacts on behavioral intention. Nevertheless, we do not preclude the possibility that there exist other factors that may also influence one’s decision to become an online group buying initiator. Future research could delve into relevant behavioral, psychological, and economic theories, such as the social comparison theory, to further explore factors that affect the decision to take on the role as an online group buying initiator. More advanced understanding of this topic relies on the accumulation of research findings from a wide range of perspectives.

References


