

Using Curiosity and Group-buying Navigation to Explore the Influence of Perceived hedonic Value, Attitude, and Group-buying Behavioral Intention

Wen-Lung Shiau

Dept. of Information Management , Ming Chuan University, Taoyuan, Taiwan
Email: mac@mail.mcu.edu.tw

Hsiao-Chi Wu

Dept. of Information Management , Ming Chuan University, Taoyuan, Taiwan
Email: hciwu@mail.mcu.edu.tw

Abstract—This study investigates through perceived hedonic values the influence of two features of group-buying websites, novel curiosity and site navigation, on online consumer purchase intentions and behavior. Using GROUPON Taiwan as a case study, a web-based online questionnaire is used to collect survey data from 290 valid participants. By analyzing this information through the Partial Least Squares program, the results support the hypothesis that curiosity and navigation have significantly positive effects on perceived hedonic values and attitudes. Furthermore, these values likewise have a significant positive effect on online group-buying intentions.

Index Terms—Curiosity, Navigation, Perceived hedonic value, Online group-buying, GROUPON

I. INTRODUCTION

Group-buying has actually been popular for many years. In the past, the phenomenon appeared on television shopping channels, where consumers called a television station to buy items leading to higher sales volumes. This type of online transaction behavior was conducted through the Internet or blogs; a primary purchaser might gather like-minded consumers together within a limited period of time to jointly purchase the same product, forming collective online group-buying behavior. This advantage of quantity over price allows for price negotiation with vendors to achieve product discounts[1, 2]. In view of these business opportunities, many group-buying websites appeared in Taiwan, such as Groupon, GOMAJI, 17Life, Lashou, and ihergo. With this latest interest in group-buying websites, corporations are increasingly concerned with factors that may influence consumer group-buying intentions, how these factors correlate with group-buying behavior, and how websites should be designed to inspire consumer group-buying intentions. Existing literature has focused on group-buying transaction mechanisms on auction websites[1, 2].

However, while current group-buying transactions occur on exclusive group-buying websites similar to auction sites, the transaction and service models are different, and thus past research results are unable to explain current group-buying phenomena. When consumers browse group-buying websites, are they only in pursuit of good and cheap products? Or is it because of curiosity? Or are there are other intentions? Babin, Darden, & Griffin[3] suggested that during the shopping process, sometimes consumers are not only buying things, but also creating emotional satisfaction. Do consumers enjoy browsing group-buying websites? Thus, this study uses curiosity and group-buying navigation to discuss the influence of perceived hedonic value and behavioral intention on group-buying websites. The findings help understand user behavior in group-buying websites, provide corporations with a direction for corporate construction and management of group-buying websites (which in turn elevates the future usage intention of consumers), and create further profit opportunities for corporations. This paper is organized as follows. Section II reviews the literature related to the theoretical background of online Group-buying. Section III introduces the research model and hypotheses. Section IV analyzes the data and discussion follows in section V, and then conclusion are offered.

II. LITERATURE REVIEW

A. Online Group-buying

Online group-buying allows consumers to buy products or services in groups at a discounted price. They provide discounts—in some cases up to 50 or 90 percent off—on products and services from different businesses, connecting a large number of online consumers with the same demands for volume discounting. In this way, group-buying sites represent a new alternative shopping paradigm, where consumers can purchase products or services at a very low price and vendors can expand their consumer base and elevate overall sales performance.

The benefits of online group-buying include lower prices due to higher volume, lower supply risks, lower management costs, interaction of consumers on the Internet.

Past studies on online group-buying focused on exploring the influence of group-buying transaction mechanisms on group-buying intention of auction websites, such as Chen, Chen, Kauffman, & Song[1] suggested that the auction mechanisms of online group-buying are a win-win strategy for both bidders and sellers. Additionally, Kauffman, Lai & Ho[2] indicated that online group-buying discounts lead consumers to perceive price fairness, in turn positively influencing price satisfaction and buying intention. Kauffman, Lai, & Lin[3] found that consumers would make decisions based on past seller situations and current prices, which affect consumer trust for the auction and ideas about financial risks of the auction.

However, Online group-buying transactions take place on exclusive group-buying websites, where consumers do not have to figure out how to find others to join in volume discounting, but only need to use group-buying website guidance to obtain discounts. Past research results can no longer explain the current transaction phenomena of group-buying. Thus, this study uses the perspective of personal curiosity and group-buying navigation to explore group-buying websites.

B. Curiosity

Curiosity is a type of intrinsic motivation and a desire to know, understand, or experience, resulting in exploratory behavior to obtain new information and sensory experiences, producing heartfelt happiness[4] and joy in life [5].

An important feature that inspires curiosity is novelty, promoting the individual to observe or explore new environments or objects, inspiring surprise and excitement. Bianchi[6] pointed out that novelty naturally draws people, and diverse, new, and surprising stimulation can lead to sensory curiosity [7, 8]. Shopping websites especially use various types of webpage technology to create new and interesting content to attract consumer exploration and stimulate shopping.

In the research field of computer media communication, Huang[7] suggested that curiosity can cause people to obtain information from websites, achieving personal values of perceived usefulness and sharing. Later, an empirical study by Shang, Shang, Chen & Shen[9] found that it is not external motivation or perceived usefulness that causes individuals to engage in online shopping, but rather personal intrinsic motivation. However, personal intrinsic motivation has been overlooked in online shopping studies, making it necessary to further explore whether curiosity can be the main factor in eliciting consumer online group-buying behavior.

C. Group-buying Navigation

Within the Internet environment, navigation refers to users accessing website media, including search and checking methods to self-guide, in order to determine

which webpages to browse. It emphasizes “exploring” as a method to find information about products, so that consumers can more conveniently obtain the information they need[10]. Hernández Jimenez, & Martin[11] suggested that website navigation functions implicate website usefulness and ease of use, with four key objectives: categorization and layout of website content, classifying information, designing navigational systems, and helping consumers discover necessary information.

Studies relating to navigation are organized as follows. Elzbieta and Eifler[12] pointed out that how consumers view online stores is determined by product categories and website characteristics. Regardless of product type, website navigation, product comparison, and information quality are most important. Éthier, Hadaya, Talbot, & Cadieux[13] researched how website interface features elicit the personal feelings of consumers. They found that navigational functions that affect perceived value in emotions, including preference, happiness, pride, dislike, defeat, and fear, all appear in shopping experiences, while most shoppers sense preference and happiness in their emotional factors. Hernández et al.[11] indicated that high quality e-commerce websites must provide accurate and frequently updated information, and at the same time must be correlated to consumer demands. Furthermore, such websites must provide navigation tools which help users feel comfortable and secure while browsing the website. These tools in turn increase opportunities for the completion of transactions.

D. Perceived Hedonic Value

Babin et al. [14] pointed out that in shopping activities, consumers have two types of perceived value: one is “utilitarian value” in pursuit of results, and the other is “hedonic value” in pursuit of happiness. In other words, consumers view shopping as work or fun. These two aspects can be used to observe consumer shopping behavioral intentions. Sometimes, consumers are not only buying items but also gaining emotional satisfaction from the shopping process, such as fun experiences, amusement, and sensory stimulation [14, 15].

The difference between perceived hedonic value and perceived utilitarian value is that perceived hedonic value is inclined toward subjectivity, which refers to personal feelings and emotional responses in the shopping process, and emphasizes shopping with a cheerful disposition. For example some consumers enjoy the process of bargaining or are excited by finding cheap products; this is the perceived hedonic value. When information on shopping websites pleases consumers, consumers think that the website is quite good, in turn elevating their perceived hedonic value for this website [14, 16-18]. Stoel, Wickliffe, and Lee[19] found that the hedonic shopping value positively affects their intention to revisit shopping centers. Sun, Wang, and Peng[20] explored the phenomenon of online work transaction websites; even though the person seeking help only offers very low compensation, why are there still so many people who are willing to offer answers? The result showed that respondents’ perceived hedonic value directly affects the continued usage intention, and affects the continued

usage intention through satisfaction. In summary, perceived hedonic value is the feeling of enjoyment, happiness, interest, fun, and satisfaction felt by consumers in the process of shopping.

E. Attitude

Fishbein & Ajzen[21] pointed out that attitude is one major determinant of an individual's intention to perform a given behavior. From the information-processing perspective, attitudes refer to positive or negative beliefs about matters or behaviors. They reflect individual evaluations of some characteristic of the matters and reveal preference or dislike over matters. Blackwell, Miniard, & Engel[22] suggested that attitude is evaluation toward people, events, or objects, and can range from highly positive acceptance to highly negative rejection. In other words, individual attitudes toward something implicate personal affective and evaluative traits.

Based on the attitude model of Martinez-Lopez et al.[23] (beliefs or Cognition → Affect → Behavior – the CAB paradigm), influencing attitude begins with beliefs or perceptions. Chen & Lee[24] proposed that there are three major elements in consumer attitudes toward shopping websites: (1) personal perceptions toward

website content; (2) perception of utilitarian shopping value; (3) perception of hedonic shopping value. When consumers have a positive evaluation of the content of shopping websites and hold a high perceived value, they have a positive attitude toward the website, producing intentions to shop there. In other words, there are three factors that affect individual attitudes toward shopping websites: the first is perception toward “website information,” and the other two factors implicate perceptions of “shopping values,” including utilitarian and hedonic value.

III. RESEARCH MODEL AND HYPOTHESES

This study combines group-buying navigation and curiosity to explore how these two constructs affect consumer group-buying intention. Furthermore, to develop a model, this study uses perceived hedonic value and personal attitudes when consumers shop as intermediary points to understand the influence of personal participation in the Groupon Taiwan group-buying website on group-buying intention, as shown in Figure 1.

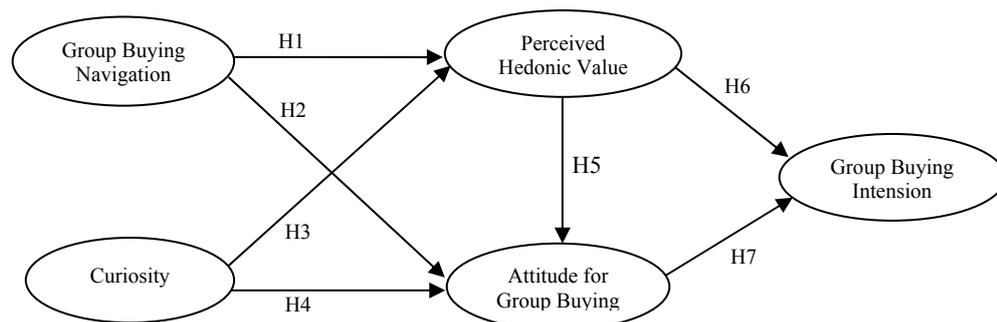


Figure 1. The research model

A. The Influence of Group-buying Navigation on Perceived Hedonic Value and Attitude for Group-buying

The primary purpose of website navigation is to help consumers effectively search for product information, decrease their search time and effort, and in turn make purchasing decisions. If consumers cannot use website navigation to find the products they want, they will no longer visit this website [10, 11, 25]. Thus, Hernández et al.[11] pointed out that if consumers can find what they need with just a few clicks on the website, they feel high satisfaction toward the website. Childers et al.[10] suggested that when consumers are browsing unfamiliar websites, they will use navigational functions to help themselves browse smoothly. A website should provide lively guidance, for instance, images, colors, music, video, and animation guides, which can enhance personal interaction with the site. This creates a sense of interest and cheerfulness within the consumer, and in turn an enjoyable experience of browsing and shopping. This positively influences personal group-buying attitudes on group-buying websites. Accordingly, the following hypotheses are proposed:

H1: Navigation will positively influence perceived hedonic value.

H2: Navigation will positively influence group-buying attitude.

B. The Influence of Curiosity on Perceived Hedonic Value and Attitude for Group-buying

Curiosity is an intrinsic motivation in that it actively inspires individuals to engage in exploratory behaviors to obtain new information and new sensory experiences, resulting in inner joy or the acquisition of knowledge to resolve problems[4, 5, 26, 27]. Further research on website design by Huang[7] notes that curiosity can inspire people to use websites to obtain information, which not only leads to a personal perception of utilitarian value but also perceived hedonic value.

Stell & Paden[8] suggested that novelty is an important feature that elicits curiosity, promoting the individual to have emotions of surprise or excitement toward new environments and situations (catalog shopping), resulting in observation and exploration behaviors in order to elicit impulse buying. Wang et al.[5] studied the consumption behavior of young Chinese people, and

pointed out that consumers will engage in novelty-seeking to find stimulation from new experiences and novelty. They will then attempt to buy new products to satisfy their sensory stimulation, allowing themselves to have stronger hedonic value and enjoy enriched and more colorful lifestyles. Koo, Lee, & Change[28] pointed out intrinsic motives similar to the hedonic motives enable to reflect the potential hedonic value and enjoyment that shopper perceived in the experience of shopping. Moon & Kim[29] researched user acceptance of the Internet, and found that the intrinsic motivation of users is more powerful than extrinsic motivation in forming positive attitudes. Thus, when group-buying websites inspire personal curiosity, hedonic value and attitudes with positive perceptions are elicited. From this background, this study proposes hypotheses H3 and H4:

H3: Curiosity will positively influence perceived hedonic value.

H4: Curiosity will positively influence group-buying attitude.

C. The Influence of Perceived Hedonic Value on Attitude for Group-buying and Group-buying Intention

From the angle of consumers pursuing hedonic value, consumers are concerned with fun, entertainment, and other emotional values implicit in shopping. They pursue exciting, fun, and cheerful experiences through the shopping process rather than simply completing the task of shopping as a chore [14, 30]. When a shopping website pleases consumers, consumers feel that this is a good website, which enhances the site's hedonic value [19]. In addition, online usage experiences of consumers and perceived value determine future shopping behavior. When consumers have higher perceived value from past shopping and service experience (feeling especially cheerful or rewarded), then they are inclined toward positive behavioral intention, and are more motivated to encourage friends or family to participate in such behaviors [17,30,31]. An information system or a convergent technology can be seen as a hedonic system/technology, while it is offering entertaining content and service. Perceived hedonic value has a positive effect on the attitude[32, 33]. And, Past research results find that perceived hedonic value positively affects the intention to visit[19, 30]. Likewise, Ha and Jang [17] suggested that perceived hedonic value positively affects behavioral intention. Thus, this study establishes the hypotheses H5& H6:

H5: Perceived hedonic value will positively influence group-buying attitude.

H6: Perceived hedonic value will positively influence group-buying intention.

D. The Influence of Attitude for Group-buying on Group-Buying Intention

Group-buying websites are new online shopping transactional platforms. Consumer attitudes toward this new type of shopping website influence whether individuals intend to shop there. According to the conceptual framework of individual beliefs, attitudes, intentions, and behaviors by Fishbein & Ajzen [21],

individual attitudes toward situations are affected by beliefs, and intentions affect personal behavior. Furthermore, the attitude model by Martinez-Lopez et al.[23] influences attitudes to beliefs and perceptions. Thus, attitude referred to in this study implicates personal perceptions and values toward situations. Based on this definition, this study deduces that in the context of new shopping platforms like group-buying websites, when consumers' emotional perceptions and judgments toward group-buying websites cause them to have positive attitudes toward such sites, these attitudes more strongly influence individual group-buying intention.

H7: Consumers with positive attitudes toward group-buying websites will have stronger group-buying intentions.

IV. DATA ANALYSIS AND RESULT

A. Survey and Sample

This study is a confirmatory empirical study, exploring the consumers' group-buying intention of Groupon Taiwan using five research constructs: curiosity, group-buying navigation, perceived hedonic value, attitude for group-buying, and group-buying intention. The survey was conducted from June 2011 to November 2011. The researcher designed the web-based online questionnaire to collect survey data. The subjects were those with experiences with the Groupon Taiwan website. There were 387 retrieved samples. 97 checked "None" for the item of "have you participated in group-buying on Groupon," and were thus deleted as invalid questionnaires. 290 valid questionnaires remained.

Most respondents were female (67%, n=195), single (94.5%, n=274), aged between 23 and 30 (62.8%, n=182), followed by 19 and 22 (26.2%, n=76), 31 and 45 (8.2%, n=24). Regarding education levels, most had university degrees (60.7%, n=176), followed by master's degrees (33.8%, n=98). More than half of the respondents were university students (54.4%, n=158). For income or disposable income per month, 26.6% (n=77) of the respondents had \$5001 to \$10000NT, 20.7% (n=60) had less than \$5000NT, 21% (n=61) had \$20001 to \$30000NT, and 12.8% (n=37) had \$30001 to \$40000NT.

PLS(Partial Least Squares) has been widely applied in the information and management research fields. Compared to LISREL (Linear Structural Relation Model), the advantages of PLS include (1) being unaffected by traditional diverse colinearity and thus overcoming the colinearity problem; (2) being unaffected by data distribution conditions; (3) lowering demand for samples [34]. Thus, this study used SmartPLS 2.0 M3 as a data analysis tool to analyze the measurement model and structural model.

The questionnaire design refers to related literature, and the items are modified based on the context of this study, and a Likert 5-point scale, ranging from 1 (highly disagree) to 5 (highly agree). The advising professor and more senior students in the program evaluated and discussed the questionnaire, modifying parts with unclear semantics, so that research subjects could smoothly fill

out the questionnaire. Thus, the scale in this study has considerable content validity.

TABLE I.
THE DESCRIPTIVE STATISTICS OF MEASUREMENTS

Construct	Item	Item Mean	Standard deviation	Error Loading	T-Statistic
Curiosity (CU)	CU1	4.01	0.81	0.80	31.43
	CU2	3.93	0.83	0.84	37.47
	CU3	3.93	0.88	0.88	54.58
	CU4	4.05	0.86	0.71	14.34
	CU5	3.86	0.80	0.54	7.10
Navigation (NAVI)	NAV11	3.62	0.76	0.77	19.97
	NAV12	3.48	0.86	0.81	32.50
	NAV13	3.69	0.83	0.80	27.96
	NAV14	3.90	0.70	0.66	13.03
Perceived Hedonic value (HED)	HED1	3.49	0.87	0.88	57.50
	HED2	3.53	0.88	0.87	46.57
	HED3	3.58	0.89	0.90	57.25
	HED4	3.58	0.94	0.76	21.20
	HED5	3.33	0.99	0.81	26.53
(Attitude) ATT	ATT1	3.60	0.84	0.87	45.03
	ATT2	3.68	0.79	0.91	63.06
	ATT3	3.69	0.83	0.91	76.32
	ATT4	3.73	0.85	0.83	33.04
	ATT5	3.35	0.96	0.84	40.01
Intention (INT)	INT1	3.76	0.87	0.88	62.99
	INT2	3.38	0.95	0.90	72.47
	INT3	3.48	0.94	0.89	59.17
	INT4	2.97	1.04	0.69	16.31

The adequacy of the measurement model was assessed through conventional tests of individual item reliability, composite reliability, convergent validity and discriminant validity. For individual item reliability, if all item loading exceeds 0.5 or smaller than 0.5, items that match this criteria will be removed[35]. As seen in Table I, The T-statistics value of items is significant ($p < 0.01$) and therefore individual item reliability is satisfactory. Composite reliability was assessed as a measure of internal consistency.

As shown in Table II, all constructs are above the recommended 0.7 threshold [36]. The AVE for each construct should not exceed a 0.5 critical value. Here, AVE was between 0.58 and 0.76. The results in Table II also show that the square root of AVE for each construct should be larger than the construct correlations, and items should be stronger on their corresponding construct than on other constructs. All items load primarily on their own construct rather than on other constructs. Hence, the criteria for convergent validity and discriminant validity are met.

TABLE II
COMPOSITE PLS RELIABILITY, AVE, AND DISCRIMINANT VALIDITY OF CONSTRUCTS

Constructs	Composite Reliability	AVE	Discriminant Validity					
			ATT	CU	HED	INT	NAVI	
ATT	0.94	0.76	0.87					
CU	0.87	0.58	0.61	0.76				
HED	0.92	0.71	0.83	0.60	0.84			
INT	0.91	0.71	0.81	0.50	0.80	0.85		
NAVI	0.85	0.58	0.55	0.46	0.55	0.51	0.76	

B. Structural Model

The hypotheses were tested by examining a structure model. The test of the structure model included estimating the path coefficients, which indicate the strength of the relationships between the independent and dependent variables, and the R^2 value. All of testing the research hypotheses are supported. Results of the analysis are shown in Figure 2 and summarized in Table III.

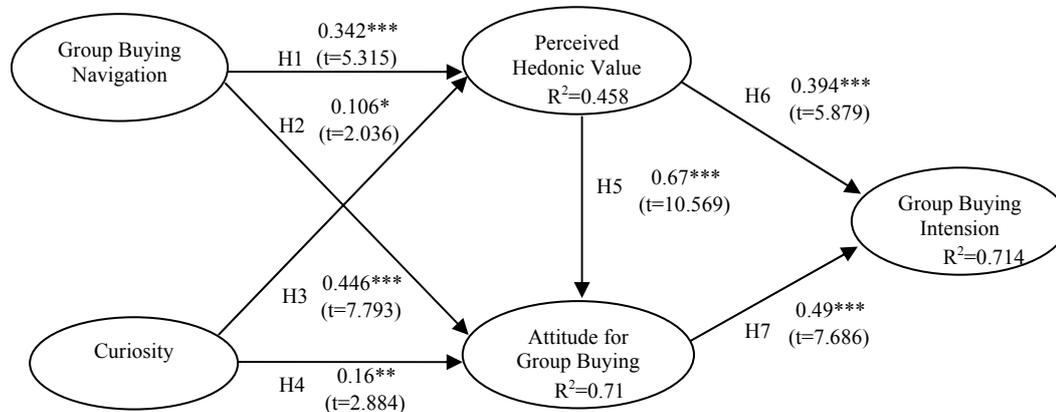
TABLE III
SUMMARY OF HYPOTHESES TESTS

Hyp.no: Hypothesis(direction)	Significance (one-tailed)	Supported?
H1: Navigation -> Perceived hedonic value	positive	Yes
H2: Navigation -> Group-buying Attitude	positive	Yes
H3: Curiosity -> Perceived hedonic value	positive	Yes
H4: Curiosity -> Group-buying Attitude	positive	Yes
H5: Perceived hedonic value -> Group-buying Attitude	positive	Yes
H6: Perceived hedonic value -> Group-buying Intension	positive	Yes
H7: Group-buying Attitude -> Group-buying Intension	positive	Yes

The results of testing the research hypotheses are explained as follows. H1: group-buying navigation has a significant influence on perceived hedonic value ($\gamma = 0.342$, $p < 0.001$), which shows that H1 is supported. Group-buying navigation has a positive influence on perceived hedonic value, which means that when users think that group-buying navigation of Groupon Taiwan is good, personal perceived hedonic value would also be high. H2: group-buying navigation has a significant influence on attitudes for group-buying ($\gamma = 0.446$, $p < 0.001$), which shows that H2 is supported. Group-buying navigation has a positive influence on attitude, which means that when users think that group-buying navigation of Groupon Taiwan is good, their attitude for group-buying is also good. H3: curiosity has a significant influence on perceived hedonic value ($\gamma = 0.446$, $p < 0.001$), which shows that H3 is supported. Curiosity has a significant positive influence on perceived hedonic value, which means that when consumers have greater curiosity for Groupon Taiwan, they have higher perceived hedonic value. H4: curiosity has a significant influence on attitude for group buying ($\gamma = 0.16$, $p < 0.01$), which shows that H4 is supported. Curiosity has a significant positive influence on attitude for group buying, which means that when users are more curious about Groupon Taiwan, their attitude for group-buying is also high. H5: perceived hedonic value has a significant influence on attitude for group-buying ($\beta = 0.67$, $p < 0.001$), which shows that H5 is supported. Perceived hedonic value has a significant positive influence on attitude for group-buying, which means that when consumers have high perceived hedonic value toward Groupon Taiwan, their attitude for group-buying is also higher. H6: perceived hedonic value has a significant correlation to group-buying intention ($\beta = 0.394$, $p < 0.001$), which shows that H6 is supported; perceived hedonic value has a significant positive

influence on group-buying intention, which means that when consumers have high perceived hedonic value for Groupon Taiwan, their group-buying intention is high. H7: attitude for group-buying has a significant influence on group-buying intention ($\beta = 0.49$, $p < 0.001$), which shows that H7 is supported. Attitude for group-buying

has a significant positive influence on group-buying intention, which means that when consumers have high attitude for group-buying toward Groupon Taiwan, than their group-buying is also high.



Note. *t-Value > 1.96 ($p < 0.05$), **t-Value > 2.58 ($p < 0.01$), ***t-Value > 3.29 ($p < 0.001$)

Figure 2 Results of PLS Structural Model Analysis

V. DISCUSSION

Current online shopping websites are a multi-activity medium, which not only sell products but also must provide social activities that attract consumer exploration of websites and inspire shopping, such as the release of new products, information searching, product price comparison, the establishment of member areas that stress personalized services, and finally forums to allow customer interaction. These measures not only allow customers to obtain real products, but also allow customers to feel hedonic value such as surprise and cheerfulness through socializing experiences on the website. In turn, these values help customers form positive attitudes toward the website and elevate buying intention, thus resulting in purchasing behavior. This study provides a good explanation of the group-buying behavioral intention. Here, curiosity and group-buying navigation have the explanatory power of 45.8% for perceived hedonic value, 71% for attitude for group-buying, and 71.4% for group-buying intention.

A. Using Curiosity to Induce Customer's Unplanned Buying

In online shopping websites, unplanned buying is a common online consumption behavior[37]. Consumers cannot touch the products, and can only use their associations based on website information and personal knowledge about the product to determine purchases. The sense of fun in shopping by consumers is an important factor in eliciting unplanned shopping behavior[38]. Stell & Paden[8] suggested that consumer curiosity leading to product information searches can produce impulse buying.

One basic advantage of group-buying websites in eliciting unplanned buying by consumers is the provision

of deeply discounted product prices. Thus, when group-buying websites enhance consumer hedonic value, this better stimulates unplanned buying. In fact, the website marks current orders, and the reminder of when orders increase in size creates surprise and excitement for customers who have bought or not bought the specified items. The animated hourglass marking the amount of time left to buy for each product can form time pressure. All of this elicits irresistible product temptation for consumers, resulting in unplanned group-buying intention.

Groupon Taiwan websites provide many different types of discount merchandise, including food, beauty and cosmetics products, daily life products, 3C products, and travel and lodging. This benefits consumers in their shopping, and inspires user curiosity in finding bargains, which prompts them to search group-buying websites so they can find the discount products they want. Besides finding real price discounts, they can also sense additional surprise and happiness. After achieving emotional satisfaction, they have hedonic value, in turn resulting the unplanned buying.

B. Using Site navigation to Enhance Customer's Involvement

This study show that group-buying navigation has a significant and positive influence on perceived hedonic value and attitude, which conforms to past research[10, 39]. Every day the Groupon Taiwan website releases new group-buying discount information, and its webpages provide clear guide menus. For instance, the homepage shows a guide function chart with product location and type as classification, with search options and pull-down menus. The speed of website search results also increases the convenience of browsing. These functions are sufficient in guiding Groupon Taiwan consumer website operations, so that consumers can satisfy their need for

finding group-buying discounts within the shortest time possible. In addition, the colorful and bright images on the Groupon Taiwan website navigation menu, such as the animated hourglasses or image maps with hyperlinked images, remind users of the amount of time remaining for purchases and guide consumers to other buying events.

Additionally, they periodically promotes some events for interaction with consumers. For example, the "Who's A Shopaholic, Bingo for Awards," users shop on the Groupon site to collect words, and if the words required are collected, they can enter a raffle for a smartphone. The lively group-buying navigation functions can enhance interaction between consumers and websites, which can help consumers generate positive feelings when searching for group-buying activities. This is not only stimulating, but allows consumers to feel fun and interest in turn enhancing their involvement and affecting personal group-buying behavioral intention .

Based on these findings, our study suggests the following for group-buying websites:(1) provide different categories of navigation to browse group-buying products, so that users acquire pleasant feelings from searching information by product categories, such as food, clothing & accessories, 3C products, or discounts, (but not by member demographics); (2) use multimedia techniques, such as hyperlinks, vivid pictures/animation, richness information, games, or movies, to motivate users' sensory curiosity and to immerse consumers in a lively shopping experience; (3) create spatial and temporal pressure, resulting in excitement and affecting one's group-buying intentions.

VI. CONCLUSIONS AND FURTHER WORK

The purpose of this study is to explore whether the group-buying websites generate hedonic values of online shopping and induce consumer intensions through website design and an individual's intrinsic motivation. The empirical results verify that online group-buying websites have this hedonic function, and that consumer's group-buying intensions can be triggered by their intrinsic curiosity and web navigation. For some consumers, group-buying shopping is a novelty. Individual's curiosity can stimulate consumers to actively explore online group-buying websites and propel them to perceive enjoyment, excitement, and playfulness. Consumers get online for shopping not only to find preferential pricing but also to enjoy a pleasant shopping experience. When users feel that the potential entertainment and emotional value of shopping is worth participating in group-buying shopping activities, this arouses group-buying intention and results in unplanned purchasing or impulse purchasing.

Despite the interesting findings of this study, there are two limitations to our results. First, the research subject of this study is limited to consumers of Groupon Taiwan, so the results may not be suited to other group-buying websites. Second, each country has its own culture and customs, and this study only implicates the context of Groupon Taiwan, so results cannot be generalized to the group-buying websites established by Groupon in other

countries. Thus, future studies can broaden the research scope incorporating consumers from other countries under Groupon for cross-cultural research. In online shopping websites, unplanned buying is a common online consumption behavior[37]. Future studies might approach this topic from a personal psychological perspective, and examine which factors elicit unplanned group-buying behavior in consumers and what sorts of unplanned group-buying behavior may be produced.

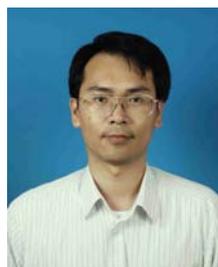
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REFERENCES

- [1] Anand, K.S., and Aron, R., "Group buying on the web: A comparison of price-discovery mechanisms", *Management Science*, vol. 49, no. 11 , pp. 1546-1562, 2003.
- [2] Kauffman, R.J., and Wang, B., "New buyer's arrival under dynamic pricing market microstructures: the case of group-buying discounts on the internet", *Journal of Management Information Systems*, vol. 18, no.2, pp. 157-188, 2001.
- [3] Babin, B.J., Darden, W.R., and Griffin, M., "Work and/or fun: measuring hedonic and utilitarian shopping value", *Journal of Consumer Research*, vol. 20, no.4, pp. 644-656, 1994.
- [4] Chen, J., Chen, X., Kauffman, R.J., and Song, X., "Should We Collude? Analyzing the Benefits of Bidder Cooperation in Online Group-Buying Auctions", *Electronic Commerce Research & Applications*, vol. 8, no. 4, pp. 191-202, 2009.
- [5] Kauffman, R.J., Lai, H., and Ho, C.T., "Incentive Mechanisms, Fairness and Participation in Online Group-Buying Auctions", *Electronic Commerce Research & Applications*, vol. 9, no. 3, pp. 249-262, 2010.
- [6] Kauffman, R.J., Lai, H., and Lin, H.C., "Consumer Adoption of Group-Buying Auctions: An Experimental Study", *Information Technology and Management*, vol. 11, no. 4, pp. 191-211, 2010
- [7] Litman, J., "Curiosity and The Pleasures of Learning: Wanting and Liking New Information", *Cognition & emotion*, vol. 19, no. 6, pp. 793-814, 2005.
- [8] Wang, C.L., Chen, Z.X., Chan, A.K.K., and Zheng, Z.C., "The influence of hedonic values on consumer behaviors", *Journal of Global Marketing*, vol. 14, no. 1-2, pp. 169-186, 2000.
- [9] Bianchi, M., "Consuming novelty: strategies for producing novelty in consumption", *Journal of Medieval and Early Modern Studies*, vol. 28, no. 1, pp. 3-18, 1998.
- [10] Huang, M.H., "Designing website attributes to induce experiential encounters", *Computers in Human Behavior*, vol. 19, no. 4, pp. 425-442, 2003.
- [11] Stell, R., and Paden, N., "Vicarious exploration and catalog shopping: a preliminary investigation", *Journal of consumer marketing*, vol. 16, no. 4, pp. 332-346, 1999.
- [12] Shang, R.A., Chen, Y.C., and Shen, L., "Extrinsic Versus Intrinsic Motivations for Consumers to Shop On-line", *Information & Management*, vol. 42, no. 3, pp. 401-413, 2005.
- [13] Childers, T.L., Carr, C.L., Peck, J., and Carson, S., "Hedonic and Utilitarian Motivations for Online Retail Shopping Behavior", *Journal of Retailing*, vol. 77, no. 4, pp. 511-535, 2001.

- [14] Hernández, B., Jiménez, J., and Martín, M.J., "Key Website Factors in E-Business Strategy", *International Journal of Information Management*, vol. 29, no. 5, pp. 362-371, 2009.
- [15] Elzbieta, L.W., and Eifler, A., "Spinning the Web: The Interplay of Web Design Features and Product Types", *Journal of Website Promotion*, vol. 3, no. 3-4, pp. 196-212, 2008.
- [16] Éthier, J., Hadaya, P., Talbot, J., and Cadieux, J., "Interface Design and Emotions Experienced on B2C Web Sites: Empirical Testing of a Research Model", *Computers in Human Behavior*, vol. 24, no. 6, pp. 2771-2791, 2008.
- [17] To, P.L., Liao, C., and Lin, T.H., "Shopping Motivations on Internet: A Study Based on Utilitarian and Hedonic Value", *Technovation*, vol. 27, no. 12, pp. 774-787, 2007.
- [18] Chen, S.H., and Lee, K.P., "The Role of Personality Traits and Perceived Values in Persuasion: An Elaboration Likelihood Model Perspective on Online Shopping", *Social Behavior & Personality*, vol. 36, no. 10, pp. 1379-1400, 2008.
- [19] Ha, J., and Jang, S.C., "Perceived Values, Satisfaction, and Behavioral Intentions: The Role of Familiarity in Korean Restaurants", *International Journal of Hospitality Management*, vol. 29, no. 1, pp. 2-13, 2010.
- [20] Parboteeah, D.V., Valacich, J.S., and Wells, J.D., "The Influence of Website Characteristics on A Consumer's Urge to Buy Impulsively", *Information Systems Research*, vol. 20, no. 1, pp. 60-78, 2009.
- [21] Stoel, L., Wickliffe, V., and Lee, K.H., "Attribute Beliefs and Spending as Antecedents to Shopping Value", *Journal of Business Research*, vol. 57, no. 10, pp. 1067-1073, 2004.
- [22] Sun, Y., Wang, N., and Peng, Z., "Working for One Penny: Understanding Why People Would Like to Participate in Online Tasks With Low Payment", *Computers in Human Behavior*, vol. 27, no. 2, pp. 1033-1041, 2011.
- [23] Fishbein, M., and Ajzen, I., *Belief, attitude, intention and behaviour: An introduction to theory and research*, Addison-Wesley, 1975.
- [24] Blackwell, R.D., Miniard, P.W., and Engel, J.F., *Consumer Behavior*, Harcourt College Publishers, 9th ed., 2001.
- [25] Martínez-López, F.J., Luna, P., and Martínez, F.J., "Online shopping, the standard learning hierarchy, and consumers' internet expertise: An American-Spanish comparison", *Internet Research*, vol. 15, no. 3, pp. 312-334, 2005.
- [26] Chen, S.H., and Lee, K.P., "The role of personality traits and perceived values in persuasion: An Elaboration Likelihood Model perspective on online shopping", *Social Behavior and Personality: an international journal*, vol. 36, no. 10, pp. 1379-1399, 2008.
- [27] Kim, M.J., Chung, N., and Lee, C.K., "The Effect of Perceived Trust on Electronic Commerce: Shopping Online for Tourism Products and Services in South Korea", *Tourism Management*, vol. 32, no. 2, pp. 256-265, 2011.
- [28] Collins, R.P., Litman, J.A., and Spielberger, C.D., "The measurement of perceptual curiosity", *Personality and individual differences*, vol. 36, no. 5, pp. 1127-1141, 2004.
- [29] Loewenstein, G., "The psychology of curiosity: A review and reinterpretation", *Psychological bulletin*, vol. 116, no. 1, pp. 75-98, 1994.
- [30] Koo, D.M., Lee, S.H., and Chang, H.S. "Experiential motives for playing online games", *JCIT: Journal of Convergence Information Technology*, vol. 2, no. 2, pp. 38-51, 2007.
- [31] Moon, J.W., and Kim, Y.G., "Extending the TAM for a World-Wide-Web context", *Information & Management*, vol. 38, no. 4, pp. 217-230, 2001.
- [32] Wang, L.C., Baker, J., Wagner, J.A., and Wakefield, K., "Can a retail web site be social?", *Journal of Marketing*, vol. 71, no. 3, pp. 143-157, 2007.
- [33] Babin, B.J., Lee, Y.K., Kim, E.J., and Griffin, M., "Modeling Consumer Satisfaction and Word-Of-Mouth: Restaurant Patronage in Korea", *Journal of Services Marketing*, vol. 19, no. 3, pp. 133-139, 2005.
- [34] Tseng, H.-C., Tu, P.P.-N., Lee, Y.-C., and Wang, T.-S., "A study of user acceptance of destination management systems in Taiwan tourism with the modified technology acceptance model", *JCIT: Journal of Convergence Information Technology*, vol. 7, no. 10, pp. 360-371, 2012.
- [35] Hyori Jeon, Yonghee Shin, and Choi, M., "Study on the User Adoption of a Convergent Evolved Technology, Mobile IPTV", *JCIT: Journal of Convergence Information Technology*, vol. 6, no. 11, pp. 1-11, 2011.
- [36] Pirouz, D.M., *An Overview of Partial Least Squares*, University of California, 2006.
- [37] Hair, J.F., Black, W.C., Babin, B., and Anderson, R.E., *Multivariate Data Analysis*, Prentice Hall, 7th ed., 2010.
- [38] Fornell, C., and Larcker, D.F., "Evaluating structural equation models with unobservable variables and measurement error", *Journal of marketing research*, vol. 18, no. 2, pp. 39-50, 1981.
- [39] Kelly, J.P., Smith, S.M., and Hunt, H.K., "Fulfillment of Planned and Unplanned Purchases of Sale-and Regular-price Items: a Benchmark Study", *The International Review of Retail, Distribution and Consumer Research*, vol. 10, no. 3, pp. 247-263, 2000.
- [40] Koufaris, M., Kambil, A., and LaBarbera, P.A., "Consumer Behavior in Web-based Commerce: An Empirical Study", *International Journal of Electronic Commerce*, vol. 6, no. 2, pp. 115-138, 2001.
- [41] Fang, X., and Holsapple, C.W., "An Empirical Study of Web Site Navigation Structures' Impacts on Web Site Usability", *Decision Support Systems*, vol. 43, no. 2, pp. 476-491, 2007.



Wen-Lung Shiau received the MS in Computer Science from Polytechnic University, New York, U.S. in 1995 and the PhD degree from the Department of Business Administration, National Central University, Chung-Li, Taiwan in 2006. He is an associate professor in the Information Management department of Ming Chuan University in Taoyuan County, Taiwan, He was a certified instructor of Cisco (CCSI), Novell (CNI), and Microsoft (MCT) and trained innumerable certified engineers. He wrote more than 50 books and published the first IPv6 book in traditional Chinese. His current research interests include Cloud Computing Service, Data Mining, Networking, and E-Business. His papers have been published or accepted in *Computer Communications*, *Social Behavior and Personality*, *Journal of Convergence Information Technology*, *Industrial Management & Data Systems (IMDS)*, *Behaviour & Information Technology*, *Computer*.

Hsiao-Chi Wu received her Ph. D. degree in Information Management from National Taiwan University, Taipei, Taiwan, in 2011. She is an assistant professor at Dept. of Information Management, Ming Chuan University, Taoyuan, Taiwan. Her research interest include E-commerce, organizational transformation, and functional explanation.