Research on influencing factors of user stickiness of community group buying platform

Xuetao Yang*, Nusanee Meekaewkunchorn, Tatchapong Sattabut, Chaiyawit Muangmee

Bansomdejchaopraya Rajabhat University, Bangkok, 10600, Thailand

*Email:394868137@qq.com

ABSTRACT. The research aims to study the level of factors contributing to the positive effect on user stickiness of community group buying platforms. And to analyze the factors contributing to the positive effect on user stickiness of community group buying platforms. This research integrated qualitative and quantitative research techniques. In-depth interview of business of community group buying platforms and to develop a valid and reliable questionnaire, as an instrument for quantitative research. The sample research aims collected were 461. Using Taro Yamane's formula at a tolerance level of 0.05. The data were analyzed by using descriptive statistics of percentage, mean, and inferential statistics of Regression Analysis. The research revealed that: Perceived functional value positively affects user stickiness. Perceived emotional value has no positive effect on user stickiness. Perceived social value has a positive effect on user stickiness. Consumer satisfaction has a positive effect on user stickiness. These conclusions provide reasonable and feasible decision-making suggestions for community group buying platforms to promote healthy development.

Keywords: Community group buying, User stickiness, Perceived value, Customer satisfaction

1   Introduction

The 52nd Statistical Report on China's Internet Development (hereafter referred to as the Report) was published in Beijing on August 28 by the China Internet Network Information Center (CNNIC) [1]. The Report states that as of June 2023, China had 1.079 billion Internet users. A new business structure known as "community group buying" has emerged as the hottest investment track at the end of 2018 and even into 2019 thanks to the development of the Internet economy, which depends on strong social media, practical payment tools, quick logistics, and favorable distribution conditions.

With the development of the economy, there is intense competition among community group buying platforms, and several small and medium-sized platforms have announced closure owing to management and financial constraints. The major platforms are extremely competitive, and community group buying players are eager to take the

market and attract clients. This paper takes the community group buying platform users enrolled in Nanning, Guangxi as the research object, and takes a community group buying platform as the research carrier to investigate the user's stickiness, and through the research results of the literature Tian [3], and Yang [4], Zou [5], and Zheng [2] in order to the inadequacy of the research on community group buying platforms as well as the advantages, this paper will focus on analyzing from the Perceived functional value, Perceived emotional value, Perceived social value, Consumer satisfaction four factors on the degree of influence on user stickiness. The research of this paper has certain theoretical and practical significance for understanding the influence of user stickiness on users of community group buying platform's behavior and improving their consumption concepts.

2   Research Objective (s)

To study the level of Factors contributing to the positive effect on user stickiness of community group buying platform. To analyze the factors contributing to the positive effect on user stickiness of community group buying platform.

3   Research Hypotheses

H1: Perceived functional value has a positive effect on user stickiness.
    H2: Perceived emotional value has a positive effect on user stickiness.
    H3: Perceived social value has a positive effect on user stickiness.
    H4: Consumer satisfaction has a positive effect on user stickiness.

4   Scope of the Research

4.1   Scope of Content

This research is a study of Research influencing factors of user stickiness of community group buying platforms which contains the following variables:

Independent Variable.

Perceived function value. The shopping function, which primarily entails the ability to enjoy the purchasing experience and post-purchase support, is what customers of community group-buying platforms require most.

Perceived emotional value. Users sense emotional accomplishment or fulfillment as well as stimulation, enjoyment, challenge, decompression, and other positive emotions.

Perceived social value. The community group buying platform has on the members' own sense of accomplishment, social identity, and harmony of interpersonal relationships.

Consumer satisfaction. After using the community group buying platform, individuals assess whether they feel delighted or disappointed by comparing the result to their own expectations.

Dependent Variable.

User stickiness. A user's continuing use of the community group buying platform to explore and shop is referred to as "user stickiness." If more time, effort, and money are put into a community group buying platform, users are more likely to stick with it.

4.2   Scope of Population

The population from the WeChat group has purchasing experience on the site for community group buying platforms. The population was undetermined since it is impossible to estimate how many people use the communal group-buying platform, at least 400 people were questionnaire data required.

4.3   Scope of area

Nanning, Guangxi, China.

4.4   Scope of Time

August 22, 2023 to September 20, 2023.

5   Research Methodology

This study takes the community group buying platform users as the research object to study the user stickiness of community buying platforms and explore the relationship between Perceived functional value, Perceived emotional value, Perceived social value, Consumer satisfaction, and User stickiness.

5.1   The Population and the Sample

The Population.
    The population from the WeChat group has purchasing experience on the site for the community group buying platform. The population was undetermined since it is impossible to estimate how many people use the communal group-buying platform.

The Sample.

Because the population was uncertain, at least 400 people were questionnaire data are required. A total of 489 questionnaires were collected in this questionnaire survey. delete someone who has no shopping experience on the community group platform, and delete the answer high identity questionnaire (i.e., all options choose the same item), someone before and after the logic does not conform to the questionnaire. In total, 461 questionnaires were obtained for data analysis.

5.2   Research Instruments

This study is a combination of quantitative and qualitative research. Data was collected through questionnaires. The questionnaire form was created through the following steps.

1. Data collection using data analysis from printed documents Books, articles, and interviews from newspapers.

2. Determine the issues and scope of questions to be consistent with the objectives. and the benefits of research by structuring the questionnaire. as the following table 1.

Table 1. Questionnaire structure of Research on influencing factors of user stickiness of community group buying platform.

Variable	Number of verses	Clause	Data	Measurement	cite
Part 1					
Personal information	(5)	1-5			
Part 2					
User information	(3) 6-8				
Part 3					
Perceived value	13				
1.Perceived functional value	(5)	9-13	Likert Scale	5 opinion levels	Sheth[7], Xiong[8]
2.Perceived emotional value	(4)	14-17	Likert Scale	5 opinion levels	Sweeney&Soutar [9], Yang[4]
3.Perceived social value	(4)	18-21	Likert Scale	5 opinion levels	Sweeney&Soutar [9], Zhang et al. [10]
Consumer satisfaction	4				WANG W T [11], Oli-
1.Consumer satisfaction	(4)	22-25	Likert Scale	5 opinion levels	ver [12], Zhou[13]
User stickiness					
1.Repeat purchase behavior	(3)	26-28	Likert Scale	5 opinion levels	Olive [12], Tian [3],
2.Purchase frequency	(3)	29-31	Likert Scale	5 opinion levels	Yang [4]
3.Proactively recommend	(3)	32-34	Likert Scale	5 opinion levels	
Total	**34**				

3. Check content validity by taking the completed questionnaire to experts for measurement and evaluation. A person with knowledge and expertise in the field of business

research checking safety matches the content coverage and language accuracy and consistency with research objectives. The researcher used the IOC index (item objective congruence) with the following scoring characteristics:

+1 means that you are sure that the questions are consistent with the research objective.

0 means you are unsure whether the question is consistent with the research objective.

-1 means that you are certain that the questions are inconsistent with the research objective.

The selection of question items uses criteria to judge content validity, which specifies that the calculated IOC index value must be greater than 0.6 (IOC>0.6) （Pukkaew, 2015)[18]. It is therefore considered that the question items are consistent with the message to be measured. As follows Table 2.

Table 2. IOC content validity examiner (item objective congruence)

Experts	Experts Qualification	Number (person)
Experts in the field of Customer Relationship Management	Academics or related agencies in Customer Relationship Management	1
Experts in statistics measure and evaluate	Independent academics or university professors with a reputation for research methodology	1
Experts in the field of Marketing psychology	Senior Marketing Specialist	1
Total		**3**

4. The researcher brings a draft questionnaire that has been edited by a qualified person. presentation of advisors considers the completeness again and brings it to the trial (try-out) with a group of people who are like the sample you want to study 30 people, then bring it to the reliability value. (Cronbach's alpha coefficient).

5. The researcher brings the defects from the experiment to the final improvement. to be printed as a complete questionnaire used to collect data for research.

Scoring criteria.

The questionnaire question characteristics is a 5-level estimation scale of Likert, with the meaning of the score and its implications as follows Table 3.

Table 3. The questionnaire question characteristics

Score level	5	means the highest level of agreement.
Score level	4	means high level of agreement.
Score level	3	means moderate level of agreement.
Score level	2	means low level of agreement.
Score level	1	means the least level of agreement.

The criteria for interpreting the average scores of the observed variables are divided into 5 levels as follow Table 4.

Table 4. Average score

Average score	4.50 – 5.00, highest level
Average score	3.50 – 4.49, high level
Average score	2.50 – 3.49, moderate level
Average score	1.50 – 2.49, low level
Average score	1.00 – 1.49, lowest level

Based on the actual data collected from the scores The minimum value is 1 and the maximum is 5, so use the criterion 1.00 – 1.50 instead of .50 – 1.50 and use the criterion 4.50 – 5.00 instead of 4.50 – 5.50. In the case where the calculated arithmetic mean ($\overline{X}$) has a value corresponding to the interval between the levels the opinions to be interpreted are at a higher level of opinion, for example, the arithmetic mean = 4.50 will mean that there is the highest level of opinion on that matter, etc.

Determining the quality of research tools.

To get quality tools The researcher therefore brought a questionnaire that was created. To test for validity and reliability. (reliability) as follows.

1. Determination of validity the researcher will check the content validity of each text to ensure that it meets the objectives of the study. by consulting with 3 subject matter specialists to examine the clarity of language, wording, and accuracy in the content Consistency of the questions in the questionnaire with the objectives (index of item objective congruency--IOC) with the following scoring criteria:

+ 1   when the expert or expert is sure that the question is consistent with the content.

0   When the expert or expert is not sure that the question is consistent with the content.

-1   when the expert or expert is sure that the question is inconsistent with the content.

follow formula:

$$IOC = \frac{\sum R}{N}$$

IOC   Instead, it indexes the consistency between queries. with research objectives.

$\sum R$ Instead, The sum of the opinions of experts or experts.

N Instead, of the number of experts or experts.

Calculation of the consistency index between questionnaires. with research objectives Must have an Index of Conformity (IOC) value greater than 0.6. It can be concluded that the questionnaire The content accuracy is within acceptable criteria. can be used to collect further data.

2. Determination of reliability (reliability) by using the questionnaire that has been verified by the advisory committee. and experts with expertise have revised and tested (tried out) with 30 test recipients of the questionnaire that have similar characteristics to the sample group to be studied before using it with the sample group. To analyze

sentiment (reliability) using the Alpha coefficient method of (Cronbach,1990), generally, Cronbach's coefficient above 0.7 is acceptable. If the reliability coefficient is greater than 0.8(Kilic, 2016) [19], indicates that the questionnaire is reliable and can be used in the study. From the data analysis results, the results are summarized in Table 5.

Table 5. Questionnaire Cronbach'α

Variable Items	Sample size	N of Items	Cronbach'α
Perceived functional value	30	5	0.812
Perceived emotional value	30	4	0.859
Perceived social value	30	4	0.811
Consumer satisfaction	30	4	0.933
Repeat purchase behavior	30	3	0.836
Purchase frequency	30	3	0.808
Proactively recommend	30	3	0.913
Total	30	26	0.927

From Table 5 Questionnaire Cronbach'α, Cronbach's alpha for all coefficients is 0.927. The Cronbach's alpha of the Perceived functional value is 0.812. The Cronbach's alpha of Perceived emotional value is 0.859. The Cronbach's alpha of Perceived social value is 0.811. The Cronbach's alpha of Consumer satisfaction is 0.933. The Cronbach's alpha of Repeat purchase behavior is 0.836. The Cronbach's alpha of Purchase frequency is 0.808. The Cronbach's alpha of Proactively recommends is 0.913. The confidence values of all factors and the total factors of the questionnaire were over 0.8. Therefore, it can be concluded that Questionnaires can be used to collect real data. with confidence values that pass the acceptance criteria.

6   Result

This paper investigates the influencing factors of user stickiness of community group buying platform in Nanning, Guangxi (Perceived functional value, Perceived emotional value, Perceived social value, and Consumer satisfaction). Based on the results of the rational analysis above, we can further verify whether the hypotheses of this paper, H1, H2, H3, and H4, are valid, as shown in table 6.

Table 6. Summary table of study hypothesis validation results

number	research hypothesis	conclusion
H1	Perceived functional value has a positive effect on user stickiness.	Accepted
H2	Perceived emotional value has a positive effect on user stickiness.	Rejected
H3	Perceived social value has a positive effect on user stickiness.	Accepted
H4	Consumer satisfaction has a positive effect on user stickiness.	Accepted

data source: based on the rational analysis

7   Conclusion and Discussion

7.1   Conclusion

To study the degree of influence of user stickiness of community group buying platform under the four factors of Perceived functional value, Perceived emotional value, Perceived social value, and Consumer satisfaction.

Perceived functional value has a positive effect on user stickiness.

Perceived emotional value has no positive effect on user stickiness.

Perceived social value has a positive effect on user stickiness.

Consumer satisfaction has a positive effect on user stickiness.

7.2   Discussion

1. The research results found that Perceived functional value has a positive effect on user stickiness.

According to Sheth's ideas [7] and theories, which support the consumption value perspective in the research domain of perceived value, consumers will change their purchase decisions as a result of functional, social, situational, cognitive, and emotional aspects. These results support Xiong's theory[8], that consumer perceptions of functional value affect their likelihood to take part in community group purchases. It is obvious that consumers' intentions to purchase fresh agricultural products in community groups have the most impact on how they view the practical worth of those purchases. This is the simplest and most likely method for customers to perceive functional value as being more valuable.

2. The research results found that Perceived emotional value has no positive effect on user stickiness.

This backs up Candan's claim [14] that it's not required to assess emotive worth in order to make customers happy right away. Arifin K., et al. [15]. It is incorrect to say that perceived emotional value has a positive effect on customer satisfaction.

3. The research results found that Perceived social value has a positive effect on user stickiness.

The results of the study are consistent with the concepts and theories of Sheth [7] that said the viewpoint of consumption value in the research dimension of perceived value, contending that consumers will alter their purchasing decisions due to functional, social, situational, cognitive, and emotional factors. This result is consistent with what Zhang [10] anticipated for Perceived Social Value. According to studies on the connection between consumer perception of value and purchasing behavior, consumer perception of social value has a significant impact on consumer buying behavior, with the perception of social value being the most useful. Consumers' motivation to take part in community group purchases is positively influenced by their perceived social worth, claims Xiong [8].

4. The research results found that Consumer satisfaction has a positive effect on user stickiness.

The results of the study consistent with the concepts and theories of Liu Jie's team [16] believed that user satisfaction directly affects user stickiness, and established a conceptual model of influencing factors of user stickiness based on this theory. Through Interpretative Structural Modeling Method and Analytic Hierarchy Process, Study the user stickiness evaluation system of audio knowledge payment platform. According to WANG T's et al. [11] concepts and theories, consumer happiness significantly improves usage intention, trust perception, and relationship commitment. Consumer Satisfaction is acceptable since it is consistent with Khatoon et al. [17] results that satisfaction positively influences purchase intention due to the indication of satisfaction features. Customer satisfaction is believed to be a key factor in promoting customer loyalty and increasing user stickiness, according to Zheng [6] Only via the continuous building of consumer delight can one gain a customer's loyalty. This highlights how platform owners for community group buying have tried to increase user satisfaction in order to increase customer stickiness.

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