Group Participation Influence on Members' Gifting Behaviors in a Social Game

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Abstract. This study investigated whether group members' participation influence individuals' gifting behaviors. The experiment was conducted on the platform of WeChat Red Packet, which is a currently prevalent money gifting social game. Forty-eight participants were recruited. Two studies were conducted. Study 1 focused on the ratio of group partners who participated in the gift exchange (participation ratio) and Study 2 focused on the total frequency of gifts sent by partners (partners' frequency). The results of Study 1 showed that in a friend group, higher friends' participation ratio in gifting social games motives individuals to send gifts more times; whereas in a stranger group, group members' participation ratio does not influence the individual's gifting behaviors. Study 2 suggested that in both friend and stranger groups, higher partners' frequency motives participants to send more gifts but shows no influence on the amount of monetary value of the gifts sent by participants.

Keywords: Money gifting · Social games · Group participation

1 Introduction and Background

The "red packet war" during the 2015 Chinese Lunar New Year holiday between two of China's Internet giants, Tencent and Alibaba, has attracted the attention of billions of Chinese people. Red packet is a kind of prevalent money gifting social games and these games are usually designed as an in-app function. The name of red packet literally means a red packet filled with money, given as a gift to friends and families. The competition reached its peak on New Year's Eve. More than one billion digital red envelopes (authorized to connect with users' bank cards) were sent through Tencent's Wechat Lucky Money users on that night, compared with 240 million by Alipay Wallet (Chen 2015).

The kind of money gifting social games is traceable to Chinese traditions. Gifting red packet is one of the most ancient Chinese traditions and is frequently employed in various interpersonal interaction situations, such as festivals and celebrations. As a unique cultural phenomenon, the tradition is always referred to as a cultural case in research in the fields of cultural study (Millington et al. 2005; Wang 2015), business (e.g. Luo 2008), and doctor-patient relationship (e.g. Huffman and Hochster 2007; Hurst 2009).

The red packet is usually gifted in a group chat context and group members share the amount in the packet. Group-level factors will influence money gifting behaviors (Dholakia et al. 2004). Previous research indicated that membership (Yoo et al. 2002), group norms and social identity (Dholakia et al. 2004; Zhou 2011), reciprocity and pro-social behaving duty (Wasko and Faraj 2000) influence member participation in group activities, but little research ever took consideration of other group members' participation in the investigation of individual's gifting behaviors. Research indicated that people participate out of reciprocity and they increased the participation if others contribute more participation (Wasko and Faraj 2000). In addition, previous study indicated that interpersonal relationships influence both behaviors on social media (Aral and Walker 2014; Burke and Kraut 2014) and money offering behaviors (Chen and Rau 2016). This study focused on the effects of interpersonal relationships on money gifting behaviors in social games.

Therefore, this study aimed to investigate in different group contexts in which individuals have different interpersonal relationships with the group members, how group participation influenced individuals' behaviors in money gifting social games. Two studies were conducted and focused on different aspects of group participation. Study 1 focused on the ratio of group members who participated in the lucky money gifting game and Study 2 focused on the total frequency of lucky money sent by group members. For a clear description, the focus of Study 1 is shorten to the term of group participation ratio and the focus of Study 2 is shorten to the term of partners' frequency. Two typical interpersonal relationships were selected as the subjects, including close friends and strangers. The two studies followed the same experiment design and procedures.

2 Experiment Design

This study chose WeChat™ as the experiment platform. WeChat is one key mobile instant messaging application developed by Tencent™ and it is the winner in the red packet war. WeChat launched its money gifting social game, WeChat Lucky Money, on 17 January 2014 (Liu et al. 2015). Lucky Money can be gifted in WeChat group chat as a group message. Group members click the message and received a sub-packet of the Lucky Money. WeChat divided the amount of Lucky Money into several sub-packet randomly. The number of the sub-packet is identified by the sender. Group members share the Lucky Money and reciprocate it.

To manipulate a group chat context for participants, the role of four "fake participants" were design who cooperated with the real participation. Two fake participants were male and the other two were female. Fake participants behaved following standard behaving processes. The real participant in this experiment was informed that he/she should complete experimental tasks with other four group members but they five were separated in five room so that they could communicate via a WeChat group chat rather than face-to-face contact.

This study developed two typical scenarios for the close friend and stranger scenarios respectively. Participants experienced both scenarios in the experiment. In the close friend scenario, participants were asked to discuss gathering during the festival holiday which would come soon. In the stranger scenario, participations were asked to discuss a piece of teamwork about each others' hometown food.

3 Study 1

Study 1 investigated whether lucky money gifting behavior was influenced by tie strength and group participation ratio in lucky money gifting.

3.1 Variables

The independent variable of group participation ratio was a between-subject one and had two levels: complete and partial. The complete level meant that in this condition, all the four fake participants gifted a five-RMB lucky money packet once in both scenarios. The partial level meant that in a partial condition, two fake participants gifted five-RMB (equal to around 0.77 US dollars) lucky money packets twice in both scenarios. Both the total value (20 RMB equal to around 3 US dollars) and count of lucky money packets gifted by the four fake participants in two conditions were the same, in order to avoid the influence of the amount and frequency of lucky money gifted by group members on participants' behaviors.

The amount and frequency of lucky money offered by participants in each scenario were recoded as two dependent variables. The two variables were shortened to the terms of participant gifting amount and participant gifting frequency.

Tie strength with the fake participants were recorded as a control variable before each scenarios using the scale developed by Gilber and Karahalios (2009). Participant's background information, previous WeChat and Lucky Money experience were also recorded.

3.2 Participants

Forty-eight participants were recruited and were divided into two group participation ratio conditions, 16 participants in the complete condition and 32 participants in the partial condition. Two samples were gender balanced. There was no significant difference in the ages between to samples (complete: Mean = 20.81, SD = 0.90; partial: Mean = 20.41, SD = 1.24; $p > .05$).

3.3 Results

3.3.1 Manipulation Effectiveness Check
The results of the independent sample t-test indicated that there were no significant differences in previous WeChat and Lucky Money experience between the two

conditions (all p > .05). The results of the analysis of variance (ANOVA) test indicated that in both conditions, there were no significant difference in the tie strength among the four fake participants according to scenarios (all p > .1) and in both sceneries, there was no significant difference between the tie strength in the two conditions (all p > .05). These results suggested the effectiveness of experimental manipulation and thus further comparisons between the two conditions were conducted. The results of the paired sample t-test indicated that in both conditions, the tie strength with close friends was higher than the tie strength with strangers (complete: t = − 9.584, p < .001; partial: t = − 19.180, p < .001); this suggested that participants indeed perceived the differences the interpersonal relationships between the two scenarios.

3.3.2 Gifting Behaviors

The data of participant offering amount and frequency did not follow the residual normality and homogeneity of variance, and thus non-parametric Mann-Whitney was used for the analyses of participant gifting behaviors. In the close friend scenario, participant gifting frequency in the complete condition was lower than the frequency in the partial condition (p < .05) whereas in the stranger scenario, there was no significant difference in participant gifting frequency between two conditions (p > .1). In both scenarios, there were no significant differences in participant gifting amount between two conditions (both p > .1). The detailed analyses results are listed in Tables 1 and 2. Table 3 shows the frequency analyses of the lucky money participants offered.

Table 1. Non-parametric Mann-Whitney testing results of participant gifting amount (RMB) in Study 1

Scenario	Condition	Mean	SD	Z	p
Stranger	Complete	4.23	3.05	−0.297	.766
	Partial	5.37	4.30		
Close friend	Complete	6.27	4.11	−1.505	.132
	Partial	8.10	4.30		

Table 2. Non-parametric Mann-Whitney testing results of participant gifting frequency in Study 1

Scenario	Condition	Count per person	Z	p
Stranger	Complete	0.94	−0.308	.758
	Partial	0.94		
Close friend	Complete	1.13	−2.310	.021
	Partial	1.41		

Table 3. Frequency analyses of the lucky money participants offered in Study 1

Scenario	Condition	Frequency	No. of persons	%
Stranger	Complete	0	3	18.8
		1	11	68.8
		2	2	12.5
	Partial	0	7	21.9
		1	22	68.8
		2	1	3.1
		3	2	6.3
Close friend	Complete	1	16	100.0
	Partial	0	1	3.1
		1	20	62.5
		2	8	25.0
		3	3	9.4

4   Study 2

Study 2 investigated whether individuals' lucky money gifting behavior was influenced by the total frequency of lucky money gifted by the fake participants.

4.1   Variables

The total sum of lucky money was related to the total frequency. It is reasonable to assume that sum amount of lucky money sent by the fake participants would influence participants' gifting behaviors. Considering that, we asked two fake participants to send a large amount of lucky money and the other two to send a small amount more times. Hence, the effects of total sum sent by the fake participants would be decreased. The independent variable of partners' frequency was also a between-subject one and had two levels: high and low. The high level meant that in this condition, two fake participants gifted a twenty-RMB lucky money packet once and the other two fake participants gifted one-RMB lucky money packets three times in both scenarios. The low level meant that two fake participants gifted a twenty-RMB luck money packet once and the other two fake participants gifted a one-RMB lucky money packet once in both scenarios. In high level the total sum of lucky money gifted by partners was 46 RMB (equal to around 7.1 dollars), whereas in the low level this figure was 42 RMB (equal to around 6.5 dollars). The small variation in the total sum of lucky money sent by partners could be ignored in a WeChat group chat context. Participants' evaluation of the value of the lucky money was assessed with one post-scenario question: "How appropriate was the total amount of money sent by other partners during the discussion using lucky money?" Responses were given on a seven-point Likert scale ranging from 7 = 'far too many' to 1 = 'far too little'. Perceptions of the amount sent in conditions 4 and 5 were similar ($p > .1$). The dependent variables were the same as those in Study 1.

4.2 Participants

Sixty-four participants were recruited and were divided into two partners' frequency conditions, 32 participants in the high condition and 32 participants in the low condition. Each condition was gender balanced. There was no significant difference in the ages between to samples (high: Mean = 20.13, SD = 1.34; low: Mean = 20.56, SD = 1.37; $p > .1$).

4.3 Results

4.3.1 Manipulation Effectiveness Check

There were no significant differences in previous WeChat and Lucky Money experience between the two conditions (all p > .1). In both conditions, there were no significant difference in the tie strength among the four fake participants according to scenarios (all p > .05) and and in both sceneries, there was no significant difference between the tie strength in the two conditions (all p > .05). These results indicated that we could conduct further analysis. In both conditions, the tie strength with close friends was higher than the tie strength with strangers (high: t = − 18.236, p < .001; low: t = − 15.705, p < . 001); this suggested that participants had a correct understand of the interpersonal relationships between the two scenarios.

4.3.2 Gifting Behaviors

We used non-parametric Mann-Whitney for the analyses of participant gifting behaviors. In both scenario, participant gifting frequency in the high condition was higher than the frequency in the low condition (both p < .05). In both scenarios, there were no significant differences in participant gifting amount between two conditions (both p > . 1). The detailed analyses results are listed in Tables 4 and 5. Table 6 shows the frequency analyses of the lucky money participants offered.

Table 4. Non-parametric Mann-Whitney testing results of participant gifting amount (RMB) in Study 2

Scenario	Condition	Mean	SD	Z	p
Stranger	High	10.81	9.24	−0.697	.486
	Low	10.73	6.05		
Close friend	High	13.97	6.12	−0.182	.855
	Low	14.01	6.84		

Table 5. Non-parametric Mann-Whitney testing results of participant gifting frequency in Study 2

Scenario	Condition	Count per person	Z	p
Stranger	High	1.44	-2.664	.008
	Low	1.03		
Close friend	High	1.84	-2.966	.003
	Low	1.31		

Table 6. Frequency analyses of the lucky money participants offered in Study 2

Scenario	Condition	Frequency	No. of persons	%
Stranger	High	0	3	9.4
		1	14	43.8
		2	13	40.6
		3	2	6.3
	Low	0	2	6.3
		1	27	84.4
		2	3	9.4
Close friend	High	1	12	37.5
		2	13	40.6
		3	7	21.9
	Low	1	23	71.9
		2	8	25.0
		3	1	3.1

5   Conclusions

Based on a money gifting social game, this study investigated the effects of group participation on members' gifting behaviors. For a general consideration of the effects, the experiment involved two group contexts in which individuals have different inter-personal relationships with the group members. The two group contexts included a close friend group context and a stranger group context. We conducted two studies to investigate two aspects of gift exchange behaviors, including group participation ratio and partners' frequency of gifting. The results of Study 1 indicated people will participate more in maintaining the relationships with a friend group in which more members participate in the inter-group relationship maintaining but they will not invest more resources. In a stranger group, other group members' participation does not influence people's money gifting behaviors. Study 2 suggests that when the amount of money involved in the gift exchange interaction is fairly small, interpersonal relationship is the main influence on individuals' gifting behavior; in contrast if the amount involved exceed a certain threshold, reciprocal norms are a better predictor of individuals' gifting behaviors than tie strength. Friendships usually involve multiple forms of interaction in addition to gifting and it is this multiplicity of interaction which gives friendships their

robustness. This means that even if a friend sends a low-value gift, individuals will reciprocate a large-value gift or a favor of equivalent value. Because relationships with strangers are more sensitive to reciprocal norms, individuals tend to respond rapidly to an increase in the value of gifts; gifting to friends is more robust against changes in other partners' behavior, as noted above. When the amount of money involved in the interaction reaches a certain threshold, however, tie strength has a less explicit (we did not mean less important) influence on gifting behavior than reciprocal norms. The effects of tie strength on gifting behavior warrant further investigation. The two studies were both conducted on a group-level factor and intragroup-level factors warrant further investigation.

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