

Social Commerce in a Networked Society: Considering Social Distance and Norms in Referral Incentive Mechanisms for Online Business

Nan Shi

School of Management, Xi'an Jiaotong University, Xi'an, Shanxi, China., shinan10@hotmail.com

Yili Hong

Management Information Systems, Temple University, , AL, United States., yili.hong@temple.edu

Kanliang Wang

Management Science and Engineering, Renmin University of China, Beijing, Beijing, China., kanliang.wang@gmail.com

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Social Commerce in a Networked Society: Considering Social Distance and Norms in Referral Incentive Mechanisms for Online Business

Nan Shi

School of Management, Xi'an Jiaotong University
Shinan10@hotmail.com

Yili Hong

Fox School of Business, Temple University
hong@temple.edu

Kanliang Wang

School of Business, Renmin University of China
Kanliang.wang@gmail.com

ABSTRACT

The referral incentive programs are one of the common incentive mechanisms to attract new customers in e-commerce websites, especially for start-ups, by leveraging existing customer's social networks. Designing an appropriate referral reward program will allow online businesses to increase customer base and enhance sales. This paper leverages the ultimatum game (sense of fairness) and construal level theory to investigate the impacts of social distance, social norm and market norm on the performance of different designs of referral reward programs. Lab experiments were conducted to test the proposed hypotheses. The results suggest that with close social distance, the success of an invitation is affected by the social norm among friends, but not monetary incentive; with far social distance, the success of an invitation is affected by division of referral bonuses. And a fair split of reward bonuses works best for friends with far social distance. The research sheds light on the appropriate design of incentives for different type of customers.

Keywords

Electronic commerce, referral incentive program, social distance, social norm, market norm, social commerce

INTRODUCTION

Recently, online referral incentive programs are burgeoning as electronic commerce penetrates people's everyday life. These programs serve as monetary incentives to motivate existing customers to spread positive word of mouth (WOM), to invite people who are networked with them with email, instant messaging to register for a website and purchase products or services. The referral incentive programs are one of the many common practices to attract potential consumers. As Buttle (1998) and Silverman (1997) pointed out, companies are increasingly paying attention to leveraging the social network of existing customers in tandem with monetary incentives (Murphy 1997) to increase customer base. However, referral incentive programs may be a cost-effective way to recruit new customers, it could also be a waste of expense. So the proper design of the incentives in different situations is crucial.

Customer base is important for online businesses, especially for start-up companies. For example, the new "star" of e-business – Groupon - tries to recruit new clients by relying on the social network of the existing clients and pays for their referrals. Besides Groupon type group-buy websites, online retailers such as Rulala.com, are also using referral programs. The referral bonuses are usually \$10 in different types of schemes of division (reward only proposer¹, only responder, or reward both). Referral, in the conventional wisdom, is a type of word of mouth occurring between friends and relatives. Referral is more intimate than digital word of mouth (WOM) such as feedback and online product reviews (Dellarocas 2003) because it involves a direct and active communication between an existing customer and his friends. The referral incentive programs also involve a market norm – monetary incentive. Therefore while programs such as WOM and reputation need a long time to build and have an effect in attracting potential customers, start-up electronic retailers cannot afford to wait that long and may be willing to sacrifice some upfront costs (referral fees) to quickly build a good size of customer pool. On the other end, only focus on the market norm, just like taking the market norm (referral for a profit) into social norm (referral to recommend) may be harmful for friendship relations, lowering effectiveness of referral programs (Heyman and Ariely 2004; Johar 2005). Therefore firms should pay attention to both social norm and market norm in designing an incentive program.

¹ In this paper, we call the existing customer who sends the referral the "proposer", and the person who responds to a referral offer as the "responder".

According to existing referral incentive programs, we extend it by the different schemes of divisions of bonuses and categorize customers based on different social distances with the proposer. Our research focuses on the social effectiveness of different referral incentive program designs (as a form of social commerce) for customers. Before developing our hypotheses, we review the related literature on referral incentive programs and social commerce. The hypotheses development is followed by a description of the research setting, the experiment design, and the methods of experiment. Then, we report the results. Finally, we discuss the results of our experiments, implications for practice, the limitations, and the opportunities for future research.

LITERATURE REVIEW

Referral programs are firms' indirect marketing strategies. The referral incentive program is a useful approach to attract potential customers, it goes beyond simply gathering information about conversations and takes steps to foster the conversations, such as establishing a consumer recommendation program in managing the social interactions (Godes, Mayzlin et al. 2005). Research has found that the connectedness of a social network's structure influences the effectiveness of buzz as a marketing instrument and the network effect moderates the payoff from a firm's investment to promote the buzz (Mayzlin 2002). When the firm's current market penetration or the proposer's referral effectiveness is sufficiently high, the referral incentive program dominates direct marketing strategies (Xiao, Tang et al. 2011). The advantage of monetary incentive also lies in the selection of only the positive word of mouth, as opposed to existing customers' true revelations of their feelings of the firm/product, which results in a mix of positive and negative experiences, e.g., in the case of online product reviews (Li and Hitt 2008, Dellarocas et al. 2008).

In the literature, experimental work on referral programs focused largely on the proposers' response to referral incentives. Studies show that the referral incentive is an effective mechanism to increase the proposer's likelihood to make referrals (Wirtz and Chew 2002), especially when the proposer is highly satisfied. Wirtz (2002) study the role of deal proneness, satisfaction, and tie strength and found that the likelihood of generating WOM to people with strong ties was greater than to weak ties. Rye (2007) examined the impact of tie strength (the relationship between the proposer and the responder), brand strength and the reward structure on the proposer's likelihood to make referrals and found that rewards are particularly effective in increasing referral to weak ties. In contrast to Rye and Wirtz, Tuk (2009) examined the responder's responses to the referral incentive program. They showed that the proposer's reward might reduce the responder's likelihood to purchase because the proposer's reward can be ill perceived by the responder and reduces the perceived sincerity of the proposer.

There are also many articles focusing on the referral incentive designs and their impacts. Existing studies of consumer referral programs have provided guidance about when rewards should be offered (Biyalogorsky, Gerstner et al. 2001; Kornish and Li 2010), quantified the impact of rewards and tie strength on the proposer's referral likelihood (Wirtz and Chew 2002; Ryu and Feick 2007), and have quantified the monetary value of making a referral (Helm 2003; Kumar, Petersen et al. 2007). The key questions remains unaddressed are whether different types of division schemes (e.g., how to split the \$10 incentive) would make a difference for referral performance for different types of dyadic proposer-responder relationships (i.e., different social distances). Because of the referral is both a division of referral bonuses as market norm (split of a pie) and a social relationship between proposer and responder as social norm (help a friend find a good merchant or a product. In this paper, we extend the existing research, taking the social distance and norms into consideration in the referral incentive design.

HYPOTHESES DEVELOPMENT

The referral programs are a new consumer acquisition method. An important metric to assess the effectiveness of such programs is to identify who will send the invitation, who will receive the invitation and what these two parties want to get from the invitation. It is important to know the motivation of the proposer and the responder. Two aspects of motivations have been identified in such a relationship: referral to recommend because two parties are friends, and referral for a profit because of the monetary incentive. Therefore we focus on the relationship between the two parties and the division of a given amount (e.g., \$10). The proposer has the right to divide the referral bonuses and he would take the risk that responder would refuse the proposal due to perceived unfairness, which resembles an ultimatum game. An ultimatum game (Güth, Schmittberger et al. 1982; Güth and Tietz 1990) is a two-player game where player 1, the proposer, can offer to divide a fixed pie, say \$10, by giving X to player 2 and keeping $10-X$ for himself. Player 2 then decides whether to accept or reject the offer. In the unique sub-game perfect Nash equilibrium (Gibbons 1989), player 1 takes the whole pie minus ϵ ($\epsilon \rightarrow 0$) and player 2 accepts ϵ , with an equilibrium solution of $(10 - \epsilon, \epsilon)$. As a matter of fact, if $\epsilon=0$, multiple equilibrium would emerge $(10, 0)$ and $(0, 0)$, and there should not be a noticeable difference between these two equilibrium situations.

Although our referral incentive programs resemble a classic ultimatum game, they have their own features. The traditional ultimatum game's proposer and responder are strangers. Our referral incentive programs take place in situations where proposer and responder are connected with social networks, albeit with different social distances. So we mainly ground our testable hypotheses based on upon theories of the social distance (Wark and Galliher 2007), and the sense of fairness in a quasi-ultimatum game (Güth, Schmittberger et al. 1982).

Incentive Compatibility with Different Social Distances

The referral incentive programs involve social norm and market norm in our research. The social norm is what governs the proposers and responders in a social relationship. Based on existing studies, social norm is about motivation rule of people with different social relationships (Camerer and Fehr 2004). The social norm takes different effects in different social contexts. We use the social distance to determine the context, which comprises of one dimension of psychological distance (Liberman and Trope 2008). Construal level theory (CLT) offers us an explanation to psychology distance (Liberman, Trope et al. 2007; Trope and Liberman 2010). High and low levels of construal are the factors influencing people's mental construal processes. The different distances should also similarly influence prediction, evaluation, and action, inasmuch as these outcomes are mediated by the construal.

The high-level construal promotes attunement to what is consistent about an object across multiple contexts. The case of referral bonuses division is an object in the contexts of three social distances. With the social distance increasing, the effect of referral bonuses distribution enhances. Subjects have to consider the division of bonuses with the proposer or responder with whom they have difference social distances. Psychological proximity triggers low-level construal, which includes the concrete and contextualized aspects of an object. The social distance determines the referral context. With when social distance is far, subjects treat each other much more politely. The subjects would choose their own behavior rule according to different social distance context. Social distance is one part of tie strength. Tie strength include neighbor, co-work, social distance and soon. If we are neighbors, our tie strength is strong. But we would treat each other like strangers with far social distance. So the close social distance is strong tie strength, but strong tie strength does not mean close social distance certainly.

The market norm is the other norm in our research, which is a part of our life (Heyman and Ariely 2004). People have to deal with each other every day, whose aim is maximizing their own utility. In referral incentive programs, the division of bonuses is based on a market norm and sending the referral to friends is based on expected utility of a proposer, which might be influenced by both market norm (maximizing monetary profits) and social norm (derive utility from helping a friend). Although different cultures have their own social norms (Fiske 1992), friendship is generally viewed similarly across cultures. A friend is someone sharing similar interests, helping when in need. Close friendship is even worth spending time and money to maintain. With far social distance, people tend to care about the relationship less; therefore extrinsic motivation such as monetary incentive may dominate the proposer's behavior. Therefore we hypothesize:

H1: When the proposer and responder's social distance increases, the division scheme offered by proposer is prone to be a fair offer (50/50).

H2: When the proposer and responder's social distance increases, responder is more sensitive about the division scheme offered by proposer.

Intention to Send or Accept an Offer

The social relationship is also a factor influencing friends sharing things (Ho and Chiu 1994). Friends with far social distance seem to act as strangers. Something outside what is in common would lead people to think about the underlying purpose of the action. If people could not understand the purpose of the referral clearly, they intend to refuse to do what is asked or requested. When the social distance is close, they have much more information than far social distance to share, which would lead them to understand each other more easily. With far social distance people have a little information to understand the real purpose of a referral, which leads them to be hesitant in sending or accepting a referral.

The referral incentive programs are one kind of invitation from existing customers to their own friends. Presumably the responders want to know the "connotations" behind the invitation. For example, what is his/her purpose for referring me to the web retailer? Correctly understanding the purpose will enhance the chance of accepting a referral. For proposers, they intend to send the invitation to the friends who understand their real purpose easily with the consideration of social relationship. So do the responders. Therefore we hypothesize:

H3: When the proposer and responder's social distance increases, proposers are less likely to send an offer.

H4: When the proposer and responder's social distance increases, adoption of responders decreases.

Consumer Involvement

The concept of "involvement" originated in social psychology and was substantially developed by the Sherifs and their colleagues (Sherif and Cantril 1947; Sherif and Hovland 1961; Sherif, Sherif et al. 1981). It has been defined as the degree to which an object or idea is centrally related to the value system of an individual (Ostrom and Brock 1968). In consumer behavior, the study of ego involvement addresses the question of how a consumer's value system is engaged when purchasing a product or doing something. For this reason, the construct of ego involvement can provide insights when consumer values or value systems are under investigation. The higher one is involved, the higher probability he is to take action. Therefore increasing involvement level of consumers is an effective method to attract consumers.

The referral bonuses programs can be seen as a type of consumer involvement. When considering the invitation for a friend with close social distance, it is not just an invitation, which is also a signal for treating social relationship. If something unimportant and probably being useful for the social relationship, they are inclined to send invitation to the friend with close social distance (Kornish and Li 2010). But when approaching friends with far social distance, the ego involvement is low, which does not promote intention for sending invitation to friends. So does the responders. According to consumer involvement theory, the proposers and responders with close social relationship are helpful for sending and adoption the invitation. The successful invitation does not only depend on the sending of proposer, but also the adoption of responder. Therefore considering the both sides of invitation, we hypothesize:

H5: The chance of successful invitation increases as social distance between the proposer and responder decreases.

Importance of Purchase

Importance of purchase was introduced as a variable in one of the first comprehensive theoretical structures in buyer behavior (Howard and Sheth 1969). It was defined as the buyer's frame of reference that corresponds to intensity of motives. Importance of Purchase was classified as an exogenous variable affecting output variables through key hypothetical constructs. Much of the recent conceptual and empirical work on involvement has centered on purchase importance. Hupfer (1971) and Lastovicka (1979) operationalized involvement by having subjects state the "importance" of the product class. Assael and Kamins (1989) had similar conceptualizations.

For any rational actor, it becomes more important when the stake goes up. Proposers and responders both want to maximize their benefits from a referral. Approaching friends with far social distance, people are more comfortable in utilizing market norm as their behavior rule. Proposers and responders with far social distance will therefore focus on the monetary benefit of invitation. Because of invitation importance is relies on the gained referral bonuses, proposers and responders' gain determines involvement of subjects. With far social distance, evenly distribute the \$10 referral bonuses will attract highest involvement from both parties. According to consumer involvement theory, the higher level involvement, the higher chance that a person will be likely to take action. Therefore we hypothesis:

H6: The chance of successful invitation is higher for a fairly spitted offer than an unfair offer, when the responder and proposer have far social distance.

METHODOLOGY

Experimental Design

Our experiments are divided into two integral parts, one is about proposers and the other is about responders. The subjects participating in our experiments as proposers are different from those attending experiments as responders. The proposer and responders attend the experiment separately, so they do not see each other in the experiment, which is the same as the referral bonuses program online. The proposer sends the invitation with the website address to responder through E-mail, MSN, QQ or other social network websites. Because of the invitation to register for a websites and purchase products or services, which is little possible to cause monetary lose, so the both sides of invitation even do not have necessary to interact for the invitation. We recruited a total of 1080 subjects, who are undergraduate students from a large public university. Each subject attending the experiment will get \$20 as the reward. According to extant research in information systems and marketing, these subjects are active online shoppers and comprise of a representative sample (Sia, Lim et al. 2009). The related concepts such as social distance were explained to all the respondents before the experiment, pretests are conducted to make sure subjects could correctly understand the meaning of the questions.

The experiments for proposers have three groups ranging from far social distance to close social distance as a trichotomy (Bogardus 1933; Wark and Galliher 2007). Since there are two types of participants (proposers and responders), 3 levels of social distance, and three different referral bonus division schemes, we employ a 3X3 full factorial design for each type of

participants. Each group has 60 subjects. We performed the analysis of statistical power (Cohen 1992), and our sample size has the statistical power to adequately detect an effect.

Table 1. Experimental Design

(0, 10), close	(5, 5), close	(10, 0), close
(0, 10), medium	(5, 5), medium	(10, 0), medium
(0, 10), far	(5, 5), high	(10, 0), high

Before the subjects receive treatments, they were told the duty of responder (register for a website and make a purchase) and the purpose of invitation with referral bonuses, respectively within each group. Subjects in different groups are not allowed to communicate information about the study. After respondents receive treatments, they are asked to finish a questionnaire. Subjects were informed that the experiment is anonymous and they are not allowed to communicate when undertaking the experiment.

We use 7-point Likert-type scale to test tendency of proposers sending invitation to friends with referral bonuses or without referral bonuses. We also test tendency of proposers sending invitation to friends with different social distances. Proposers will be given three choices: give the total referral bonuses \$10 to the responder, keeping the whole referral bonuses \$10 or dividing it equally. Subjects are also asked to report the following: whether they will send an offer, whether they will accept an offer, what is the amount they want to offer to the responder, respectively. We discuss the details of the experimental procedure in the following section with analysis and results.

Experimental Procedures and Analyses

We performed manipulation check and respondents are shown to have received the treatments. To test our hypotheses, independent sample t tests are constructed. In order to measure the deviation from fair offer (5, 5), we take bid 10:0 as bid 0:10. The choice 5:5 is marked as 5. The choice 10:0 (responder get nothing) and 0:10 (responder gets the whole pie) are marked 0 and 10. The average price offered by proposers with far social distance is 5.5833. The average price offered by proposers with medium social distance is 6.3158. The average price offered by proposers with close social distance is 7.6724 (see figure 1.). The result between close social distance and medium social distance is $t=15.37$, $P<0.05$. The result between close social distance and far social distance is $t=78.506$, $P<0.05$. The result between medium social distance and far social distance is $t=18.151$, $P<0.05$. The one way ANOVA analysis reveals that $F= 14.343$, $P<0.05$. The results fully support hypothesis 1.

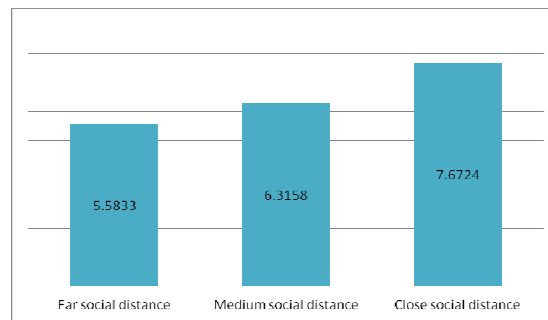


Figure 1. Average price offered by proposers with different social distance

We then calculate the percentage of responders who accept the offer. With close social distance, average percentage of adoption of responders getting nothing (10, 0), \$5 (5, 5) and \$10 (0, 10) are 0.08947, 0.9123 and 0.9333, respectively (see figure 2). Percentage of adoption for responders who get nothing is not statistically significant from responders who get \$5 ($t=0.397$, $P>0.1$). Percentage of adoption for responders who get nothing is not statistically significant from responders who get \$10 either ($t=2.233$, $P>0.1$). Similarly, percentage of adoption for responders who get \$5 is not statistically significant from responders who get \$10 ($t=0.722$, $P>0.1$). The one-way ANOVA analysis also reveals an insignificant effect ($F= 0.274$, $P>0.1$). Therefore, monetary incentive does not seem to enhance referral performance, for friends with close relationship. The results indicate that close friends are affected by social norm of accepting a friend's recommendation (referral) because of trust and friendship, rather than market norm (monetary incentive).

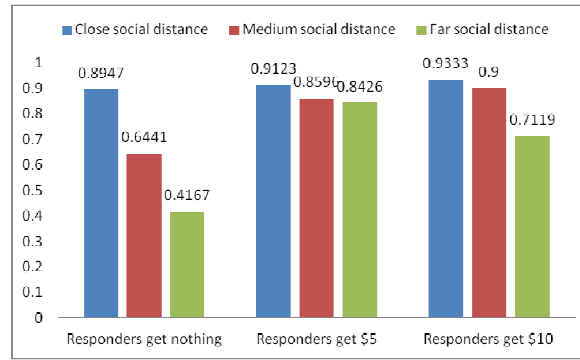


Figure 2. Average adoption of responders with different referral bonuses and social distance

With medium social distance, average percentage of adoption of responders getting nothing (10, 0), \$5 (5, 5) and \$10 (0, 10) are 0.6441, 0.8596 and 0.9, respectively (see figure 2). Percentage of adoption for responders who get nothing is lower than responders who get \$5 ($t=33.303, P<0.05$). Percentage of adoption for responders who get nothing is lower than responders who get \$10 ($t=58.952, P=0<0.05$). Percentage of adoption for responders who get \$5 is not statistically significant from responders who get \$10 ($t=1.801, P>0.1$). The one way ANOVA analysis reveals that $F= 7.5, P<0.05$. Therefore, the effect of monetary incentive for median social distance is stronger than the effect for close social distance.

With far social distance, average percentage of adoption of responders getting nothing (10, 0), \$5 (5, 5) and \$10 (0, 10) are 0.4167, 0.8426 and 0.7119, respectively (see figure 2). Comparing the percentage of responders who accepted the offer, the group gets a fair division (5, 5) is higher than the group that gets nothing ($t=33.557, P<0.05$). Comparing the percentage of responders who accepted the offer, the group gets the whole pie (0, 10) is higher than the group that gets nothing ($t=7.775, P<0.05$). Surprisingly, comparing the percentage of responders who accepted the offer, the group gets a fair division (5, 5) is higher than the group that gets the whole pie ($t=8.556, P<0.05$).

Therefore, to sum the above, Hypothesis 2 is supported.

Then we focus on the intention of proposer to send an offer. The average intention of proposers sending to friends with far, medium and close social distance is 2.9056, 4.655 and 5.555, respectively, on a 7 point Likert scale (see figure 3.). Statistically, proposers' intention for sending invitation to friends with close social distance is higher than friends with far social distance ($t=4.349, P<0.05$). Proposers' intention for sending invitation to friends with medium social distance is higher than friends with far social distance is ($t=4.181, P<0.05$). However, proposers' intention for sending invitation to friends with close social distance is higher than friends with medium social distance is ($t=0.219, P>0.1$). The one way ANOVA analysis shows $F= 73.726, P<0.05$. Therefore overall we find support for Hypothesis 3.

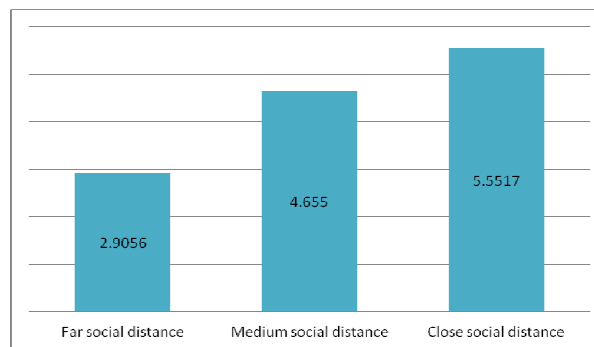


Figure 3. Intention of proposers sending invitation to friends with different social distance

We calculate the percentage of responders who accept the offer. The average adoption of responders approaching invitation of proposers with far, medium and close social distance is 0.6477, 0.8011 and 0.9138, respectively (see figure 4.). Percentage of responders' adopting invitation from friends with close social distance is higher than medium social distance is ($t=40.395, P<0.05$). Percentage of responders' adopting invitation from friends with close social distance is even higher than friends with far social distance ($t=218.85, P=0<0.05$). Percentage of responders' adopting invitation from friends with medium social distance is also higher than far social distance is ($t=42.713, P<0.05$). The one way ANOVA analysis reveals that $F= 19.943, P=0<0.05$. The results support hypothesis 4.

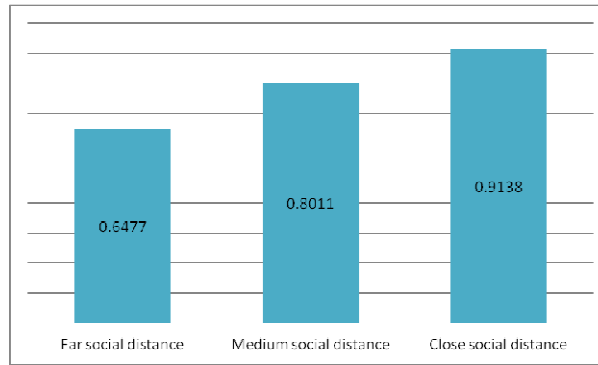


Figure 4. Average adoption of responders approaching invitation from friends with different social distance

According to analysis about Hypothesis 3, the difference of intention to send invitation to friends with close social distance and medium social distance is not significant. But the average of intention to send invitation to friends with close social distance is higher than medium social distance. Based on analysis on hypothesis 4, when social distance decreases, the percentage of responders who accept the referral increases. When we consider a measure for successful invitation, we multiply the value of proposers’ intention to refer of with a given social distance (e.g., far) with the percentage of responders who accepted the referral with the same social distance, respectively. The reason for doing so is our experiment design. According to our experiment design, the entire proposers would offer the division scheme and answer some questions for measuring the intention to send the invitation. We cannot get the percentage of proposer sending the invitation. So we use the value of proposers’ intention instead of the percentage of proposer sending the invitation. The result is graphically represented in Figure 5. We observe that the successful invitation with close social distance is higher than far and medium social distance. All the comparisons are statistically significant. Therefore Hypothesis 5 is supported.

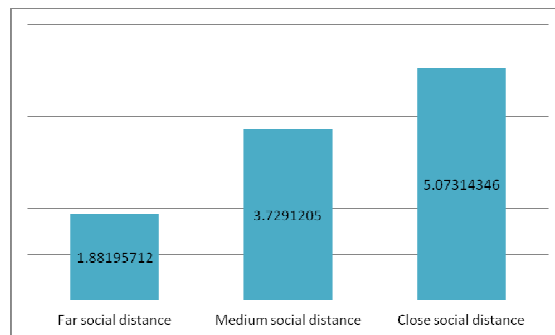


Figure 5. Successful invitation with different social distance

We proceed to perform more analysis. The analysis of Hypothesis 2 implies that proposers are prone to choose a fair split of referral bonuses while facing “friends” with far social distance. To test it formally, we calculate the percentage of successful referral based on the multiplication of percentages of proposers who proposed a scheme (e.g., both get \$5) with the percentage of adoption of responders with the same division scheme. We can see the result as follows (see figure 6.). The result is statistically significant and points out that a fair split of referral bonuses is the most successful incentive scheme for friends with far social distance.

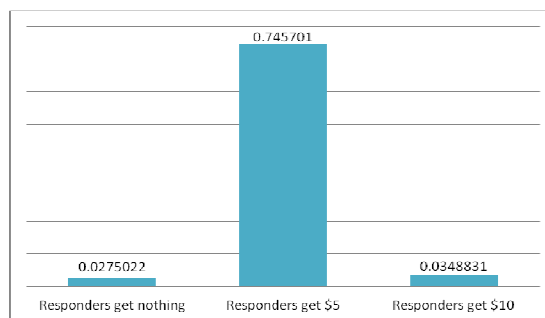


Figure 6. Percentages of successful invitation (far social distance)

KEY FINDINGS AND IMPLICATIONS

In this study, overall we find support for all the theoretical hypotheses. In many cultures, with close social relationship, people take market norm (monetary incentive) as a harmful thing for the relationship. Even talking about money may be perceived as negative or embarrassing among friends with close social distance. Indeed, the results confirm the intuition that close friends do not really care about the division of referral bonuses when deciding whether to accept a referral. Nevertheless, proposers intend to leave all the referral bonuses to responders. If proposers choose to divide the referral bonuses equally, responders would think proposers taking them as strangers. For responders, they will believe the referral is a friend's genuine recommendation, which they are bound to respond. Social norm becomes the most influence factor, which leaves division of referral bonuses unimportant. Although the intention of sending invitation to friends with close social distance is higher than medium social distance, the difference of them is not significant. The reason for this may be some proposers know the retailer is not his best friends' interest, so some of proposers have little intention to send an invitation which is different from his best friends' interest. Therefore, for an online business (e.g. a start-up retailer), it is important to properly set incentives. For example, proposers should be allowed to avoid a fair split of \$10 when sending the offer to a best friend, however, when sending the offer to an acquaintance, a fair split would be optimal.

Facing friends with far social distance, proposers are not familiar with responders, therefore they cannot extrapolate whether the proposer is trying to profit from the referral or genuinely recommending this retailer or product. Since they have little in common, the responder will believe the proposer is trying to divide the referral bonus with him. The division of referral bonuses becomes an important incentive guided by the market norm of maximizing profit from the splitting the referral bonus. Similar to an ultimatum game, a fair split of referral bonuses is a choice to make benefit of each other equally and fairly. So proposers tend to choose a fair split of referral bonuses. Without enough information to judge the purposes of invitation influences the adoption of responders with \$10 referral bonuses. The fair split of referral bonuses gives a statement only about maximization of each other's benefit, which would not lead responders considering the purposes of invitation except benefit. With far social distance, proposers have little information about the responders. Therefore they might fear the responder might misunderstand the invitation and might avoid inviting people with far social distance.

The situation of medium social distance is complex, in which social distance is between far and close. The effect of social relationship and the feeling of fairness are stronger than far social distance and weaker than close social distance. Although the difference of adoptions for \$10 and \$5 is not significant, the adoption of \$10 is still higher than \$5. Responders do take the social distance and division of the \$10 into their consideration. Though sense of fairness and social distance both influence the adoption, neither plays a leading role. For one thing, responders take refusing the invitation as harmful for social relationship, for another, they want to gain something from the invitation. So the value of benefit is not important, the invitation with referral bonuses is important, which causes that difference of adoptions for \$10 and \$5 is not statistically significant.

Aiming at successful invitation, the intention to send invitation and the adoption of responders are two sides of the same coin. The successful invitation among friends with close social distance is highest. When social distance increases, the effect of social norm on people's behavior is decreases. Aiming at the benefit with the invitation, market norm takes the leading role. So the fair split of referral bonuses is the optimal according to market norm.

CONTRIBUTIONS AND CONCLUSIONS

Our study examines how proposers share their referral bonuses in situations that they need to face the possibility of refusal by responders. The results of our research reveal that when the social distance decreases, the offer of proposers deviates from a fair offer of referral bonuses. When both sides of invitation are friends with close social distance, people pay much attention to social norm of helping each other and foster the friendship rather than market norm of making a profit of out of the referral. Proposers and responders do not care about the division of referral bonuses in the condition of close social distance. With far social distance, both sides of the invitation pay attention to their own benefit, which is a concern about fairness. The social norm takes the leading role in the condition of close social distance while the market norm is harmful for the result of successful invitation. When the market norm takes the leading role, people choose their motivation according to market norm rather than social norm.

Considering the influence of social distance without the division of referral bonuses, our research reveals that proposers and responders all prefer the friends' invitation with close social distance. The social distance determines the ability to understand each other. So proposers and responders prefer the friends' invitation with close social distance. The responders would not

understand the purpose of invitation coming from friends with far social distance, so they prefer accepting the invitation coming from friends with close social distance.

With social distance increasing, people tend to take the fairness into their consideration just as the market norm. Based on the market norm, both parties maximize both sides' benefit within the invitation. So the fair split of referral bonuses will gain as many successful invitations as possible among the friends with far social distance. Our results provide additional empirical support for ultimatum games that strangers tend to focus on the fairness of an offer, in the context of social commerce referral.

The previous research relied on theories of tie strength, brand and so on in understanding the optimal design of referral incentive mechanisms. Our research brings in the division of referral bonuses (fair split versus an unfair offer) and social distance to the table, which extends extant research on incentive design for a networked social commerce. While extant research focused on the proposer, we find that the referral is not just the proposer sending the invitation; the adoption of responder is also crucial. Our research shed light on how to divide the referral bonuses between proposers and responders with different social distances. Online WOM research only cares about an existing customer's reporting their true feeling, which may either be good or bad for the firm. Our research looks at the proposer's positive and active word of mouth on the responders in their networks. What is more, our subjects are in the scenarios of friends with different social distances in a network, therefore we also extend empirical research on ultimatum game, which are for completely strangers. Our research incorporates social distance, which is different from tie strength. The tie strength include neighbor, co-work and so on (Marsden and Campbell 1984). When the social distance is close, the tie strength is usually strong. However, when the tie strength is strong, the social distance is not necessarily close (for example, a co-worker may be closely tied to a person, but he may not be of close social distance). The implication for practice of our research is that the electronic commerce websites aiming at gaining as many successful invitations as possible should take the dynamics of social norm and market norm into their consideration. We show that in some cases, offering a monetary incentive, presumably costly for the firm, may not be effective. One practical implication is that retailer websites should divide its clients into different segmentations by their types of connections. The suitable referral bonuses programs could be chosen by the dominant norm that governs the proposer and responder's behavior - market norm or social norm. Our research calls for attentions of social aspects of the social commerce, when market rules can be harmful.

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