



The effect of incentive structure on referral: the determining role of self-construal

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Abstract

Incentivized referrals are frequently used by firms to recruit new customers. Currently, most companies use two-sided incentive plans that reward both the referrer and the target. This is sensible and likely popular since both parties (the existing customer and target of the referral) are rewarded, potentially increasing the likelihood of successful referral conversion. That said, a small number of firms use one-sided incentives that reward only the referrer or only the target, which tend to be of lower cost. In the current paper, we examine how to effectively use one-sided incentives from a cross-cultural perspective. Specifically, we posit that reward-target incentives are more effective than reward-referrer plans among consumers who are high (instead of low) in interdependence because reward-target plans can appease social concerns, which are more important to those high (vs. low) in interdependence. Across a series of studies, we confirm these predictions and show that managerially relevant variables that influence social concerns (e.g., opaqueness of the referral information, product-liking risk) moderate our effect.

Keywords Word of mouth · Incentives · Referrals · Self-construal · Social concerns

Introduction

Incentivized word of mouth (WOM) programs—programs that reward consumers for engaging in WOM—are frequently used by firms across industries (e.g., financial services, entertainment, fitness, and food; Kumar et al., 2010; Liu, 2006; Villanueva et al., 2008). Questions on how best to design incentivized WOM plans have attracted both industry (Mosley, 2021; Saasquatch, 2014) and academic interest (Biyalogorsky et al., 2001; Kornish & Li, 2010; Ryu & Feick, 2007; Xiao et al., 2011). One important question is who obtains the reward

(Ahrens et al., 2013; Gershon et al., 2020; Jung et al., 2020; Mosley, 2021). A recent industry report surveyed approximately 100 referral programs and found that 91.2% of incentivized WOM plans reward both the referrer and the target while only 8.8% rewarded either one or the other (Saasquatch, 2020). Gershon et al. (2020) identified approximately 300 incentivized WOM plans and found that 55% rewarded both existing customers and potential customers (reward-both plans), 40.5% rewarded only existing customers (reward-referrer plans), and 2.6% rewarded only the targets (reward-target plans). Although these estimates might differ due to the time of the survey and specific firms surveyed, they highlight the popularity of two-sided over one-sided incentive plans.

Two-sided plans are likely effective and beneficial in many circumstances since both parties involved in the referral process are rewarded, which could increase the likelihood of successful referral. However, some companies have started using one-sided plans that reward only the referrer or only the target due to these plans' lower cost (since only one party needs to be compensated; Petrova, 2021). For instance, as of 2022, Ruelala, an online clothing boutique, rewards the referrer \$10 for each conversion¹; Blue Apron, a popular subscription meal kit service, uses a reward-target incentive where the target

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¹ <https://help.ruelala.com/hc/en-us/articles/360009690034-Invite-Friends>

receives a free box of food while the referrer receives nothing (Ian, 2018); and financial services corporation Charles Schwab rewards only the target with up to \$500 in cash.²

Within academia, researchers have also started to investigate the effectiveness of one-sided referral plans (e.g., Gershon et al., 2020; Wirtz et al., 2013). For instance, Wirtz et al. (2013) focus on reward-referrer plans and examine the interaction between reward size and tie strength on referral behavior. Gershon et al. (2020) explore how one-sided incentives might affect the referrer and the target differently and examine how action costs influence the referrer and target differently.

The current work extends this important yet nascent literature. Specifically, we adopt a cross-cultural perspective and posit that self-construal may be an important factor that determines the effectiveness of one-sided incentive plans (reward-referrer vs. reward-target). Self-construal captures how one defines oneself with respect to others (Markus & Kitayama, 1991); those who are relatively more interdependent tend to be more other-focused, whereas those who are relatively less interdependent tend to be more self-focused (Singelis, 1994). Therefore, we posit that consumers who are low in interdependence are likely to prefer incentive plans that reward the self because self-interest is a cardinal motivation (Miller, 1999). However, among those who are high in interdependence, the preference shifts toward reward-target incentive plans due to their greater concerns for others.

This research contributes to both theory and practice. Addressing Verlegh et al.'s (2013) call for the study of WOM from a cross-cultural perspective, the present research is the first to empirically explore how incentivized WOM is affected by culture and can potentially shed light on the mixed findings from prior research. Namely, some prior research on one-sided plans shows that reward-target plans are better than reward-referral plans (Bapna et al., 2014; Gershon et al., 2020), whereas other research shows the opposite (Ahrens et al., 2013). The present research suggests that self-construal might be one variable that could potentially reconcile these earlier findings.

From a practical perspective, the present paper sheds light on how different one-sided incentive plans could be used. Namely, two-sided incentive plans are popular in practice and likely effective since both people involved in the referral process are rewarded, thus increasing the likelihood of referral conversion. However, for firms looking to explore cheaper, one-sided incentive programs, the current paper provides actionable insights: when the target customers' self-construal can be discerned or induced, the selection of one-sided incentive programs should be customized based on self-construal. Specifically, reward-target plans are more effective than reward-referrer plans in high interdependent cultures such as

Eastern cultures. Furthermore, within the same culture, firms can activate high (vs. low) interdependent self-construal by using different ads (Study 3), which can be beneficial if the firm has a preset incentive structure. For instance, if the firm's preset referral program rewards the target, then the firm can boost the effectiveness of the referral plan by using ads that activate an interdependent mindset (e.g., ads that stress family and the well-being of others).

In addition, our research elucidates cases where a particular one-sided (reward-referrer or reward-target) incentive plan might dominate, regardless of the referrer's self-construal. When referral information is opaque (Study 4) or when there is high uncertainty about how the target might feel about the referred brand (Study 5), reward-referrer incentive plans tend to be more effective than reward-target plans across the board.

Theoretical background

Since the early 1950s, WOM has been recognized as an important marketing tool (Rosen, 2000) that not only influences the entire consumer decision process (Brown & Reingen, 1987; De Bruyn & Lilien, 2008; Herr et al., 1991) but also affects product sales and firm performance at the aggregate level (Chevalier & Mayzlin, 2006; Liu, 2006; Luo, 2009; Pauwels et al., 2016; Tirunillai & Tellis, 2012). Acknowledging WOM's importance, firms have begun to offer incentives (e.g., vouchers, gifts, free minutes, and cash) for WOM, which have been effective in generating WOM (compared to no incentives, Ryu & Feick, 2007; Wirtz et al., 2013).

Incentivized WOM has three important components (Zhang et al., 2019): 1) the incentive size (e.g., \$0 vs. \$1 vs. \$25), 2) the incentive type (e.g., money vs. voucher), and 3) the incentive structure (i.e., who receives it). The existing research has focused heavily on the first component (Orsingher & Wirtz, 2018; Ryu & Feick, 2007; Wirtz & Chew, 2002; Wolters et al., 2020). Specifically, prior research has shown that any incentive is better than no incentive (e.g., \$10 vs. \$0; Ryu & Feick, 2007; Wirtz & Chew, 2002) and that referrals increase with the size of the incentive (e.g., \$50 vs. \$10; Biyalogorsky et al., 2001; Kornish & Li, 2010; Hinz et al., 2011; Orsingher & Wirtz, 2018; Wirtz & Chew, 2002; Xiao et al., 2011). These effects are moderated by brand strength (Ryu & Feick, 2007), tie strength between the referrer and the target (Ryu & Feick, 2007; Wirtz et al., 2013) and product type (Dose et al., 2019; Zhu & Lin, 2019). Namely, Ryu and Feick (2007) found that the effect of rewards on referrals (relative to the no-reward baseline) is stronger for weak brands than for strong brands. Wirtz et al. (2013) showed that the effect of incentive size on referrals was moderated by tie strength such that as an incentive increased, referral intention increased for strong ties but decreased for weak ties. Finally, Dose et al. (2019) showed that providing

² <https://www.schwab.com/public/schwab/nn/refer-client.html>

a reward was more effective in increasing referrals (relative to the no-reward baseline) for less innovative products than for more innovative products, and Zhu and Lin (2019) found that incentives were more effective in increasing referrals for hedonic than for utilitarian goods.

Jin and Huang (2014) examined the second important component (incentive type) and found that incentives issued as vouchers were more effective than those issued as money, particularly for weak brands (Jin & Huang, 2014). Notably, the positive effect of vouchers/reward (vs. cash) is moderated by the referrer's creative self-efficacy (belief that one can produce creative outcomes; Tierney & Farmer, 2002), where for those with high creative self-efficacy, gift rewards are more effective than cash in eliciting referrals; however, the effect reverses for those with low creative self-efficacy (Zhang et al., 2019). Finally, Zhu and Lin (2019) showed that referrals are facilitated when there is a fit between the reward type and the product type. Specifically, hedonic gifts are more effective than utilitarian gifts in eliciting referrals for hedonic products than for utilitarian products.

Incentive structure

In contrast to the research mentioned above, we focus on the third important incentive dimension: the incentive structure, that is, who receives the reward (see Table 1 for a review of the relevant literature). Among those studies that have looked at incentive structure, some have done so within the confines of tie strength and brand strength (Jin & Huang, 2014; Ryu & Feick, 2007). Ryu and Feick (2007), for example, examined several factors affecting the effectiveness of incentives on WOM, including the incentive size, brand strength, tie strength and incentive structure. They found that reward-referrer incentive plans are particularly effective in encouraging WOM among weak ties. Hong et al. (2017) examined the intersection of incentive structure and social distance between the referrer and the target and found that incentive structure (in their context, how the incentive is split) matters more for distant than for close targets. Jin and Huang (2014) focused on the effectiveness of reward type (money vs. vouchers) and brand strength and found that vouchers given to the referrer (reward-referrer plans) are more effective than money in encouraging referrals for weak brands.

Other papers have focused on incentive structure as the main construct. Xiao et al. (2011) used an analytical model to indicate when companies should offer reward-target rather than reward-referrer plans. Bapna et al. (2014) showed that in the context of a social mobile game, reward-target incentive plans are more effective than reward-referrer incentive plans in encouraging existing users to make referrals. Similarly, Gershon et al. (2020) examined referral conversion and found that the effect of incentive structure on conversion depends on the extent to which the referrer versus the target bears action

cost (i.e., the time, effort, or money required for making the referral/signing up for the service) and the extent to which each plan can compensate the cost. Their results showed that reward-target plans (which compensate the target for their cost in time/effort) are more effective than reward-referrer plans. However, other researchers have found the opposite effect. Ahrens et al. (2013) studied incentive splits (i.e., how a fixed incentive is split between the referrer and the target) and found that there are more referrals when the split disproportionately favors the referrer. Taken together, prior research results have been mixed on which one-sided incentive plan structure is most effective. We posit that self-construal might be an important moderating variable, as it can make people differentially sensitive to the distinct benefits of reward-referrer versus reward-target incentive plans.

Incentive structure and differential benefits

On the one hand, there are reasons why reward-referrer plans might be more effective than reward-target plans. Reward-referrer plans operate through self-interest – i.e., people want to earn something for themselves – a desire that dictates much human behavior (Miller, 1999). Marketers have been able to harness the power of this motive. For example, coupons, a type of monetary reward, have long been found to be effective in increasing purchases (Arkes et al., 1994; Heilman et al., 2002). Similarly, research has shown that consumers are more likely to (re)join loyalty programs when they are given incentives (Bolton et al., 2000; Jang & Mattila, 2005; Krishnamurthi et al., 1992; Thomas et al., 2004).

Conversely, reward-target plans might be favored by referrers for several reasons. Making a referral is an innately social action, and thus, referrers are likely to consider not only the monetary gains for themselves but also the social consequences of making the referral (Jin & Huang, 2014; Orsingher & Wirtz, 2018). Although people often behave out of self-interest, they are also keenly aware that others hold the same motives (Miller, 1999; Miller & Ratner, 1996, 1998); thus, referrers might worry about appearing selfish if they make a referral for which they were paid (Dose et al., 2019; Jin & Huang, 2014; Shi & Wojnicki, 2007; Wirtz et al., 2013). Therefore, reward-target incentive plans may be more effective because they assuage social concerns.

Taken together, reward-referrer plans are attractive in terms of financial benefits (e.g., money, free items, extended trials, coupons) while reward-target plans are attractive in terms of social benefits (e.g., others' positive impression of the referrer).

Self-construal and incentive structure

Given that different benefits are associated with each type of one-sided incentive plan, we posit that the relative

Table 1 Summary of prior research on incentivized WOM

Author	Independent variables (moderators(s) if applicable)	Dependent variable	Summary of findings	Methodology	Examines incentive structure	Examines culture (or any consumer heterogeneity)
Gershon et al. (2020)	Incentive structure (Moderators: anonymity, social cost)	Conversion rate	In the referral stage, providing an incentive increases the referral rate regardless of incentive structure. In the uptake stage, reward-target is more effective than reward-referrer.	Lab and field experiments	Yes	No
Ahrens et al. (2013)	Incentive structure and incentive size	Referral rate	When the incentive is fixed in size, referrals increase as the proportion of the incentive allocated to the referrer (vs. target) increases.	Field experiment	Yes	No
Bapna et al. (2014)	Incentive structure	Referral rate	Reward-target incentive plan is more effective than reward-referrer incentive plan in generating adopters.	Field experiment	Yes	No
Hong et al. (2017)	Incentive structure (Moderator: social distance)	Referral intention	Reward-both plans are more effective than one-sided (reward-referrer and reward-target) plans when the target is a weak tie to the referrer.	Lab and field experiments	Yes	No
Jung et al. (2020)	Framing of incentive structure	Referral intention	Reward-target framing of referral plan (i.e., prosocial framing) leads to higher referral intention than reward-referrer (i.e., egoistic) or reward-both (i.e., equitable) framings.	Lab and field experiments	Yes	No
Ryu and Feick (2007)	Incentive size (Moderators: tie strength, brand strength, incentive structure)	Referral intention	As incentive size increases, referral intention increases. When the brand is a weak (vs. strong) and the target is a weak tie, reward-referrer plan is more effective than reward-target plan. However, when the brand is a strong and the target is a close tie, reward-target plan is more effective than reward-referrer plan.	Lab experiments	Yes	No
Schmitt et al. (2011)	Customer type (referred vs. non-referred)	Value of referred customers	Referred customers show higher contribution margin, retention rate, and customer value than non-referred customers.	Archive data from a bank	No	No
Xiao et al. (2011)	Firm's market penetration, referral effectiveness, impression management factors	Choice of referral program	When impression management factors are more salient, incentives should reward the target more than the referrer.	Analytical model	Yes	No
Wirtz et al. (2013)	Incentive size (Moderator: tie strength)	Referral intention	As the incentive size increases, consumers' referral intention decreases. This is driven by referrers' perception of how they will be viewed by targets (metaperception). This negative effect is moderated by tie strength.	Interviews and lab experiments	No	No
Verlegh et al. (2013)	Presence of incentive type, anonymity of the reward, reward type, incentive structure	Target's response to rewarded referrals	Targets react negatively to the presence of a reward; this is due to the inference that the referrer has ulterior motives. This effect is stronger for unsolicited referrals and weak ties.	Lab experiments	Yes	No
Jin and Huang (2014)	Incentive type (Moderators: incentive size, brand strength, and incentive structure)	Referral intention and target's acceptance intention	Compared to in-kind rewards, monetary rewards lead to lower referral intention and acceptance intention. This negative effect is stronger for weak brands.	Lab experiments	Yes	No
Orsingher and Wirtz (2018)	Incentive size (Moderator: tie-strength)	Referral intention	As incentive size increases, the attractiveness of the referral plan increases but the meta-perceived favorability of the referral decreases. These two opposing forces jointly drive the impact of incentive size on referral intention.	Lab experiments	No	No

Table 1 (continued)

Author	Independent variables (moderators(s) if applicable)	Dependent variable	Summary of findings	Methodology	Examines incentive structure	Examines culture (or any consumer heterogeneity)
Wirtz et al. (2019)	Perceived relationship quality, reward attractiveness, referral metaperception, opportunism and involvement	Referral behavior	Metaperception and attractiveness of the reward are the most important drivers of referral behavior; however, their relative importance varies based on the consumer segment.	CRM data and survey	No	No
Dose et al. (2019)	Product/service innovativeness (Moderators: incentive opacity, incentive size, incentive structure)	Referral intention	Product innovativeness increases referral intention. This positive effect is driven by anticipated self-enhancement. Incentives decrease this positive effect, but this is moderated by reward opacity, incentive size and structure.	Lab and field experiments	Yes	No
Wolters et al. (2020)	Incentive size	Profitability from referred new customers	As the incentive size increases, the number of new customers increases, but total profitability from the referred new customers decreases.	Field experiment and archival data from the telecommunications industry	No	No

effectiveness of reward-referrer versus reward-target incentive plans likely depends on variables that influence how much people weight each of these two types of benefits. We posit that self-construal may be one such variable. Self-construal captures how people view themselves in relation to others in the social environment (Markus & Kitayama, 1991; Shavitt et al., 2008). Those who are relatively low in interdependence (i.e., high in independence) tend to view themselves as separate from others and unique, tend to be motivated by goals of differentiation, autonomy and freedom (Lalwani & Shavitt, 2009; Markus & Kitayama, 1991), and are more likely to follow the principle of self-interest (Miller, 1999; Singelis, 1994). In contrast, those who are relatively high in interdependence (i.e., low in independence) tend to view themselves within the context of social relationships, be motivated to connect with others (Markus & Kitayama, 1991), and behave in accordance with societal norms (Lalwani & Shavitt, 2009).

Self-construal influences individuals’ information-processing and decision-making styles (Monga & John, 2007; Nisbett et al., 2001). Specifically, those who are relatively high in interdependence tend to be more cognizant of interpersonal relationships when making decisions (Kühnen et al., 2001; Mao et al., 2015; Sinha & Lu, 2016). In other words, self-construal influences the weight that consumers place on social others when they make decisions. Those who are less interdependent tend to focus on the self, whereas those who are more interdependent tend to care more about social others, placing more value on what others feel or think as a consequence of one’s own actions (Lalwani & Shavitt, 2009; Markus & Kitayama, 1991; Zhang et al., 2014).

Given that incentives that reward the referrer (reward-referrer plans) increase WOM by appealing to the referrer’s self-interested desire for money (or products) and that incentives that reward the target (reward-target plans) increase WOM when people are sensitive to the social implications of making the referral, it follows that:

H1 The effectiveness of incentive structure depends on self-construal. Reward-target (vs. reward-referrer) incentive plans are more effective among consumers who are high (vs. low) in interdependence

H2 This effect [H1] arises because high (vs. low) interdependent-oriented consumers are more sensitive to social concerns and reward-target (vs. reward-referrer) incentive plans are more socially appealing

Moderation by referral opacity and risk

While interdependent consumers’ concern for others might be driven purely by innate concern for others, research has suggested that this social concern is at least partially driven by impression management goals, with interdependent people

wanting to appear to be socially appropriate and sensitive (Lalwani & Shavitt, 2009).

For instance, Winterich and Barone (2011) found that while interdependent consumers prefer donation- over discount-based promotions, this effect arises only in cases where the donation charity is identity-consistent; in other words, interdependent consumers donate when it helps them fulfill their self-presentation goal of signaling a particular social identity. Along these lines, Hartmann et al. (2021) showed that interdependent consumers are more likely to retweet messages about corporate social responsibility (CSR) activities when the messages are accompanied by a high number of retweets, likes and replies (i.e., are socially validated).

Prior research shows that self-presentation goals are affected by context. Namely, people's self-presentation and impression management objectives are attenuated in private settings where others have no knowledge of their actions (Ariely et al., 2009); thus, if the effectiveness of reward-target (vs. reward-referrer) plans among interdependent consumers is driven by social concerns, then these effects should attenuate in private settings when targets are unable to link the reward to the referrer (and thus referrers anticipate less social recognition). In other words, in such a context, highly interdependent consumers are less driven by social concerns and thus should be less persuaded by reward-target incentive plans:

H3 The effect (H1) is attenuated when referral information is opaque (i.e., private)

In addition to referral characteristics (opaque vs. not opaque), product-specific variables may also moderate our effect. Prior research shows that highly interdependent people are more sensitive to others' social approval and rejection (Kitayama et al., 2004) and are more sensitive to social risk than their low interdependent counterparts (Mandel, 2003). Specifically, highly interdependent people are highly concerned with "losing others' respect, approval and commitment" (p. 527, Kitayama et al., 2004) and place high importance on not hurting others' feelings and ensuring social agreeableness (Kim, 1994).

In our research context, then, if the preference for reward-target (vs. -referrer) incentive plans among highly interdependent people (H1) is driven by the perception that reward-target plans are more socially appealing (H2), then our effect should attenuate when the reward-target plan is associated with high social risk. One context in which this might arise is where there is high uncertainty whether the target will like the referred product. Gift-giving research has shown that consumers are often concerned about gift recipients' reactions to a given gift (e.g., Gino & Flynn, 2011) because misprediction of recipients' preferences yields negative consequences such as reduced social connectedness (Cavanaugh et al., 2015; Zhang & Epley, 2012).

Therefore, we propose the following:

H4 The effect (H1) is attenuated when there is high product-liking risk

Overview of the present research

Although self-construal is an individual-level construct (Cross & Madson, 1997; Suls et al., 2002), it tends to vary at the cultural level (Hofstede, 2001; Markus & Kitayama, 1991; Singelis, 1994), where those from individualist cultures (e.g., North America, Western Europe) tend to be less interdependent than those from collectivist cultures (e.g., East Asia, Latin America; Hofstede, 2001; Markus & Kitayama, 1991; Singelis, 1994). Hence, to examine the robustness of our predictions, we test our theory both within the same culture (by measuring individual differences in self-construal in studies 2, 4 and 6 and by manipulating self-construal in Study 3) and across different cultures (by comparing US and Asian samples in studies 1 and 5). Specifically, we conducted a series of six studies (see Table 2 for a summary). Study 1 tests the basic hypothesis that reward-target plans are more effective than reward-referrer plans among consumers who are high rather than low in interdependence (H1). Studies 2 and 3 explore whether this effect (H1) is driven by social concerns (H2). Experiments 4 and 5 show important boundary conditions of the effect (as specified in H3 and H4), while Study 6 benchmarks the effectiveness of one-sided incentive plans against that of two-sided ones.

Study 1: Incentive structure and American versus Asian consumers

Study 1 sought to test our basic effect by using samples from different cultures that tend to differ in average self-construal. We recruited participants from Eastern cultures (e.g., China, Singapore), which tend to be high in interdependence, and Western cultures (e.g., the US, Western Europe), which tend to be low in interdependence (Hofstede, 2001; Lalwani & Shavitt, 2013).

Method

To enlist cross-cultural participants, we recruited undergraduate students from two major international universities: one major university in Hong Kong (N = 69) and one major private university in the southeastern US (N = 119). Given prior suggestions that Asian and Hispanic individuals tend to be more interdependent (Aaker & Williams, 1998), participants who identified with one of these two ethnic groups were excluded from the US sample to better ensure that the sample

Table 2 Summary of studies

Main purpose	Study	Sample	Industry and incentive type	Findings
Basic Effect	1	Hong Kong vs. American Students	Gym -Membership Discount	Showed the basic effect in culture-based differences in self-construal.
Mediator	2	Chinese Adults	Apparel Brand -Free Gift	Replicated the basic effect and showed the mediating role of social concerns. Self-construal measured with Singelis's (1994) approach.
	3	Chinese Students	Food -Free Gift	Manipulated self-construal using Aaker and Lee's (2001) and Hamilton and Biehal's (2005) ad exposure and replicated the effect; also showed that social concerns mediate the effect.
Moderators	4	American Adults	Credit Card -Cash	Replicated the basic effect and showed that when the reward information is opaque (thus unable to appease social concerns), interdependent consumers' preference for reward-target plans is attenuated.
	5	Chinese vs. American Students	Restaurant -Free Gift	Replicated the basic effect and showed that when the underlying product is high risk (the target might not like the product), interdependent consumers' preference for reward-target plans is attenuated.
Comparison with Reward-Both	6	American Adults	Credit Card -Cash	Replicated the basic effect and showed that the reward-both plan is 1) unaffected by self-construal and 2) less efficient than the reward-referrer and reward-target plans in many contexts.

captured independent participants (Lalwani & Shavitt, 2013).³ In addition, two respondents from Hong Kong University were non-Asian students and were excluded from the sample. Ultimately, our sample comprised 67 Asian undergraduate students (71.6% female; $M_{\text{age}} = 21.27$ years, $SD_{\text{age}} = 1.82$) and 82 American undergraduate students (non-Asian, non-Hispanic; 67.1% female; $M_{\text{age}} = 20.55$ years, $SD_{\text{age}} = .92$).

The participants were randomly assigned to one of two incentive structure conditions: a reward-referrer condition and a reward-target condition. In all conditions, the participants were asked to imagine that they had joined a gym and that the gym was launching an incentive plan. In the reward-referrer condition, the participants were informed that if they successfully recommended a friend to sign up for the gym, they (the participant) would receive a 30% discount on their membership fee; in the reward-target condition, the friend would receive the 30% discount. The participants were informed that each party (the referrer and the target) would know who received the reward (consistent with how incentive plans tend to function in the real world; Dose et al., 2019; see [web appendix A](#) for the full instructions).

Then, the participants were asked to indicate their referral intention using a four-item index adapted from Wirtz et al., 2013: 1) "How likely are you to recommend to your friend/colleague that he or she join this gym?", 2) "How likely are you to encourage your friend/colleague to join this gym?", 3) "How likely are you to put effort into recommending that your friend/colleague join this gym?", (1 = very unlikely, 7 = very likely, anchors for the first 3 items) and 4) "To what extent will you be enthusiastic in your recommendation that your friend/colleague join this gym?" (1 = not at all, 7 = very much so; $\alpha = .95$).

To verify that our American and Asian participants differed in self-construal, we used an abridged (Kühnen et al., 2001) version of Singelis's (1994) self-construal scale with the following items: 1) "My happiness depends on the happiness of those around me", 2) "I am the same person at home that I am at school", and 3) "I act the same way no matter who I am with" (1 = strongly disagree, 7 = strongly agree).⁴ Following prior research (e.g., Hong & Chang, 2015; Wu et al., 2011), participants' dominant self-construal was calculated by subtracting their mean independent scores ($M = 3.21$, $SD = 1.09$) from their mean interdependent scores ($M = 3.65$, $SD = 1.01$), where higher scores indicate higher interdependence ($-6 = \text{low interdependence}$, $6 = \text{high interdependence}$). The

³ These same data inclusion criteria were applied across all studies that proxied self-construal via ethnicity (studies 2 and 5). Some earlier research juxtaposed Asian and non-Asian respondents (Aaker & Williams, 1998), and our results hold under this criterion.

⁴ We used an abridged self-construal scale here, as it serves as a manipulation check rather than as a predictor.

results showed that, indeed, the Asian students were relatively more interdependent than the American students ($M_{\text{Asian}} = .86$, $SD = 1.09$ vs. $M_{\text{American}} = .09$, $SD = 1.55$, $t(147) = 3.41$, $p < .001$, $d = .57$). Basic demographic information (gender, age, and race) was collected at the end of the survey.

Results

To test our predictions, we conducted a 2×2 ANOVA on composite referral intention, which revealed a significant interaction between culture and incentive structure ($F(1, 145) = 9.74$, $p = .002$, $\eta_p^2 = .06$; see Fig. 1). A planned contrast showed that for those low in interdependence (American students), the likelihood of referral was higher when they themselves were given the reward ($M_{\text{reward-referrer}} = 5.13$, $SD_{\text{reward-referrer}} = 1.42$ vs. $M_{\text{reward-target}} = 4.42$, $SD_{\text{reward-target}} = 1.81$, $t(145) = 2.29$, $p = .023$, $d = .44$); for those high in interdependence (Asian students), the referral likelihood was higher when the target received the reward ($M_{\text{reward-target}} = 4.92$, $SD_{\text{reward-target}} = 1.34$ vs. $M_{\text{reward-referrer}} = 4.07$, $SD_{\text{reward-referrer}} = 1.36$, $t(145) = 2.12$, $p = .036$, $d = .63$). Neither the main effect of incentive structure nor the main effect of culture was significant ($ps > .25$).

Discussion

Using culture as a proxy for self-construal, Study 1 provided initial evidence that the effectiveness of incentive plans depends on self-construal. Consistent with H1, reward-target incentive plans were more effective than reward-referrer plans among consumers who were high in interdependence (Asian consumers) while reward-referrer incentive plans were more effective than reward-target plans among those who were low in interdependence (American consumers). Please note that these results were replicated in supplemental Study 1, which measured self-construal in a real decision context (see web appendix B: supplemental Study 1).

Study 2: Social concerns as the underlying mechanism

Study 2 was conducted with three goals. First, instead of using culture as a proxy for self-construal, we sought to test our prediction by measuring self-construal within a single culture. Second, we sought to examine the underlying mechanism (social concerns, H2). Third, whereas Study 1 examined referrals for gym memberships, Study 2 used a different product category, i.e., apparel, to test the robustness of our effect.

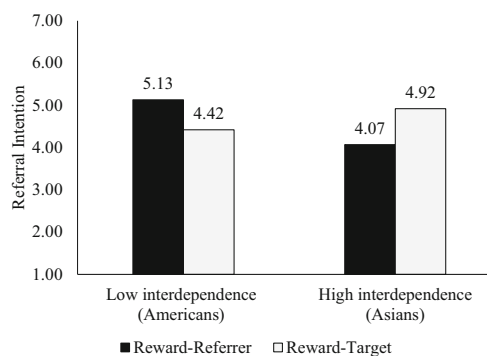


Fig. 1 Interactive effect of self-construal and incentive structure on referral in Study 1

Method

Three hundred thirty-one nonstudent Asian participants (59.5% female; Median⁵_{age} = 41–50 years) were recruited from a Chinese survey company’s online panel (<https://www.wjx.cn/>) to complete the 2 (incentive structure: reward-referrer vs. reward-target) \times self-construal (measured) between-subjects study for a nominal payment.

All participants were asked to imagine that they were members of a brand community (through which they could learn about the brand’s new offerings, promotions, and trends). In the reward-referrer condition, the participants were informed that the brand was running a promotion in which the participant would receive a free scarf or wallet as a reward if the participant recommended that a friend/colleague buy any product from the brand. In the reward-target condition, only the friend/colleague would receive a free scarf or wallet as a reward. Referral intention was measured with items adapted from Study 1 ($\alpha = .92$; see web appendix C for the full instructions).

If interdependent consumers’ preference for reward-target over reward-referrer plans is driven by high social concerns (as posited in H2), then they should be more sensitive to how making a referral under each incentive plan would affect others’ view of them, such that the reward-target plan should be more likely to be seen as socially appropriate than the reward-referrer plan. To capture this process, we used two seven-point items adapted from Dijk and de Jong (2009) and Ratner and Kahn (2002) to measure anticipated social evaluation: 1) “How do you think your friend/colleague would judge you if you made the recommendation?” (1 = extremely negatively, 7 = extremely positively) and 2) “To what extent do you think your friend/colleague would like you if you made the recommendation?” (1 = dislike a lot, 7 = like a lot). The two items were averaged to form the anticipated

⁵ The survey platform (<https://www.wjx.cn/>) requests that researchers collect age information in ranges rather than specific numbers. Therefore, age was measured with the following categories: below 18, 18–25, 26–30, 31–40, 41–50, 51–60, and above 60.

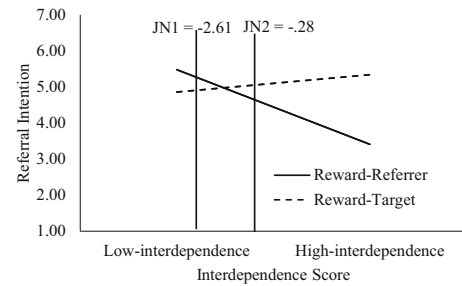
social evaluation index ($r = .73, p < .001$). Singelis’s (1994) 24-item self-construal scale,⁶ a well-validated measure of self-construal measures that has been used extensively in consumer research (Aaker & Lee, 2001; Agrawal & Maheswaran, 2005; Ahluwalia, 2008; Chen et al., 2017; Hong & Chang, 2015; White et al., 2012; Winterich & Barone, 2011; Zhang & Mittal, 2007), was used to measure self-construal. The sample items include “I have respect for the authority figures with whom I interact” and “I act the same way no matter whom I am with” (1 = strongly disagree, 7 = strongly agree). Because people can have both interdependent and independent beliefs, prior research has shown that it is thus important to focus on the relative activation of the two self-construals, as this relative score is more predictive of behavior than either one alone (Kitayama et al., 2009; Suh et al., 2008). Thus, we followed prior research (Hong & Chang, 2015; Kwon & Mattila, 2015; Wu et al., 2011) and calculated participants’ dominant self-construal, computed as the difference between their mean interdependence ($a = .79, M = 5.30, SD = .65$) and mean independence ($a = .79, M = 4.91, SD = .76$) scores; higher scores indicate higher interdependence ($-6 =$ low interdependence, $6 =$ high interdependence). Basic demographic information (gender, age, and race) was collected at the end of the survey.

Results

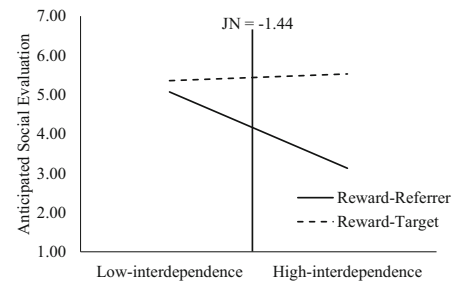
Referral intention To test the interactive effect between incentive structure and self-construal, we used PROCESS Model 1 ($X =$ incentive structure [0 = reward-referrer, 1 = reward-target], $M =$ self-construal [mean-centered], $Y =$ referral intention) with 5000 bootstrapping iterations. The results showed a significant interaction between self-construal and incentive structure on referral intention ($b = .55, se = .18, t(327) = 2.99, p = .003$, see Fig. 2a). To decompose this interaction, we conducted a floodlight analysis to identify the Johnson–Neyman (JN) points (Spiller et al., 2013). The results showed that while those low in interdependence (with a mean-centered self-construal score of -2.61 or lower) were more likely to make a referral under the reward-referrer condition ($b = -.98, se = .50, p = .050$), those high in interdependence (with a mean-centered self-construal score of $-.28$ or higher) were more likely to make a referral under the reward-target incentive condition ($b = .30, se = .15, p = .050$). The results also revealed a main effect of the incentive structure ($b = .45, se = .14, t(327) = 3.14, p = .002$), with the reward-target plan being more effective than the reward-referral plan, which is unsurprising, given that the participants were from a highly interdependent culture (China). Finally,

⁶ Given that the sample was composed of Chinese participants, we translated Singelis’s 24-item scale into Chinese.

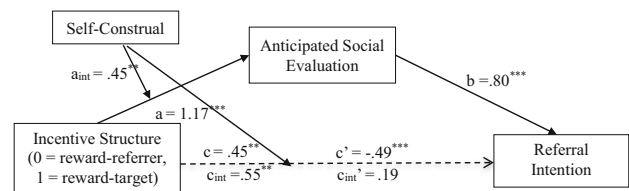
A) Referral intention



B) Anticipated social evaluation



C) Mediation analysis



* $p < .05$, ** $p < .01$, *** $p < .001$

Fig. 2 Interactive effect of incentive structure and self-construal on referral intention (panel A), anticipated social evaluation (panel B) and the mediator analysis (panel C) in Study 2

there was a marginal main effect of self-construal ($b = -.16, se = .09, t(327) = -1.72, p = .086$).

Anticipated social evaluation To test whether interdependent consumers perceived the reward-target incentive plan as more socially appealing than the reward-referrer plan, we conducted an analysis (Hayes, 2017, Model 1 with 5000 bootstrapped samples) to determine whether self-construal (M) and incentive structure (X) jointly influence anticipated social evaluation (Y). The results showed a significant interaction between incentive structure and self-construal ($b = .45, se = .16, t(327) = 2.75, p = .006$; see Fig. 2b). Decomposing this interaction, the results of the floodlight analysis showed the JN point to be -1.44 ; thus, at mean-centered self-construal scores of -1.44 and higher, participants in the reward-target anticipated more favorable judgment by others than those in the reward-referrer condition ($b = .53, se = .27, p = .050$; see Fig. 3b). The results also showed a significant main effect of the incentive structure ($b = 1.17, se = .13, t(327) = 9.23, p < .001$), where reward-target plans were seen as more socially

appealing than reward-referrer plans. There was also a main effect of self-construal ($b = -.18, se = .08, t(327) = -2.21, p = .028$), where those who were higher in interdependence tended to anticipate more negative social evaluations.

Moderated mediation To test whether the greater effectiveness of reward-target than reward-referrer plans among people with high interdependence was driven by social concerns (as posited in H2), we performed a moderated mediation analysis using Hayes’s (2017) PROCESS Model 8 (with 5000 bootstrapped samples) with $X =$ incentive structure (0 = reward-referrer, 1 = reward-target), $M =$ anticipated social evaluation, $Y =$ referral intention, and $W =$ self-construal (mean-centered).

The results showed that anticipated social evaluation mediated the interaction between the incentive structure and self-construal on referral intention (indirect effect: $a \times b = .36, se = .12; 95\% CIs [.10, .58]$). Specifically, there was an interactive effect between incentive structure and self-construal

($a_{inter} = .45, se = .16, t(327) = 2.75, p = .006; 95\% CIs [.13, .77]$), and anticipated social evaluation was positively related to referral intention ($b = .80, se = .04, t(326) = 18.31, p < .001; 95\% CIs [.71, .88]$; see Fig. 2c for all path coefficients). Among those high in interdependence (+2 SD above the mean), the reward-target plan was seen as more socially favorable than the reward-referrer plan (as captured by the anticipated social evaluation), which, in turn, increased referral intention (indirect effect = 1.49, $se = .23, 95\% CIs [1.02 to 1.94]$). Among those relatively low in interdependence (−2 SD below the mean), anticipated social evaluation did not mediate referral behavior (indirect effect = .37, $se = .22, 95\% CIs [−.04 to .84]$). These results are consistent with the social concern explanation (H2) for why consumers high in interdependence are more responsive to reward-target than to reward-referrer incentive plans.

Discussion

The results of Study 2 again showed that the effects of incentive structure depend on self-construal, where reward-target plans (vs. reward-referrer) are more effective among those who are high (vs. low) in interdependence (H1). Importantly, this study showed that this effect is driven by social concerns (H2). Those who are more interdependent are more sensitive to social judgments and prefer reward-target over reward-referrer incentive plans, as the former are more socially appealing. In addition, this study further illustrated the robustness of our effect by replicating our previous results under a different type of incentive (a free product instead of a discount) in a different product category (apparel instead of gym memberships). Please note that these results were also replicated in a supplemental study that used a different measurement of self-construal (see web appendix D: supplemental Study 2).

Study 3: Manipulated self-construal

Studies 1 to 2 tested our theory by using culture as a proxy for self-construal or measuring self-construal directly. In Study 3, we manipulated self-construal (through product ads) to rigorously test our effect and to provide additional process evidence for our theory.

Method

Two hundred eighty-seven students (50.5% female; Median_{age} = 18–25 years) from a major university in mainland China completed the 2 (incentive structure: reward-referrer vs. reward-target) × 2 (self-construal: low interdependence vs. high interdependence) between-subjects study for pay.

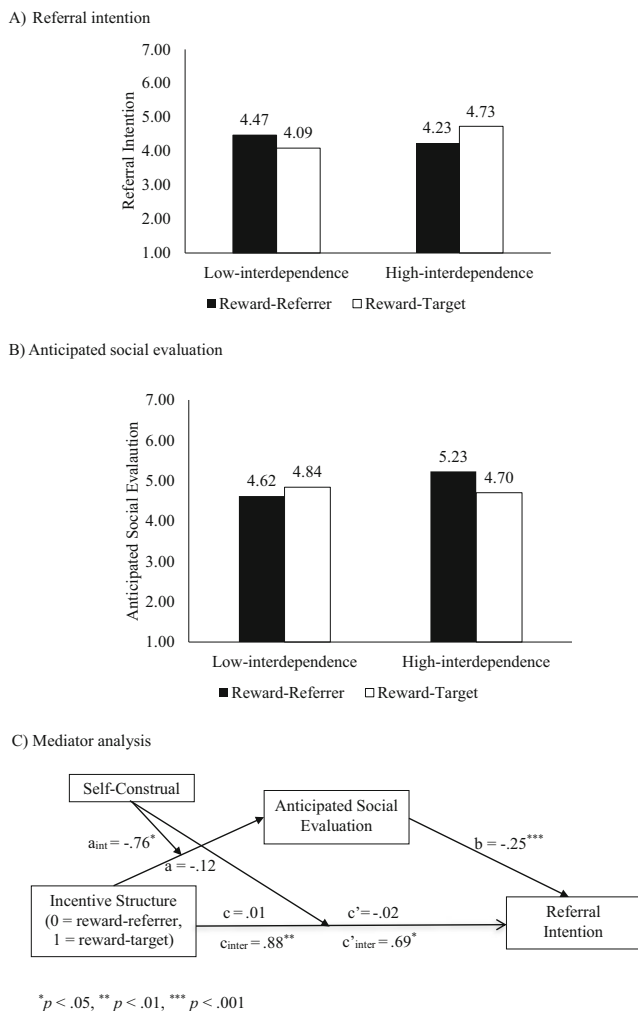


Fig. 3 Interactive effect of incentive structure and self-construal on referral intention (panel A) and anticipated social evaluation (panel B) in the mediator analysis (panel C) in Study 3

First, we manipulated self-construal by exposing participants to one of two different ads (adapted from Aaker & Lee, 2001; Hamilton & Biehal, 2005). Participants in the low-interdependence condition saw an ad that emphasized the self (“Give yourself a chance at great taste...”), whereas those in the high-interdependence condition saw an ad emphasizing family and friends (“Give your family and friends a chance at great taste...”). After reading the ads, participants were provided additional information about the product in the advertisement: The “Happy Chips” were a new product from a well-known food company. The product was available in three flavors. The participants were then asked to imagine that they had tried the chips and liked them and that the company was conducting a promotion. To check whether this manipulation was effective, we conducted a pretest with a separate group of students from the same pool used in the main study ($N = 128$, 75.0% female, Median_{age} = 18–25). After watching the ad, the pretest participants indicated the extent to which they thought about 1) themselves and 2) others (e.g., friends, family; adapted from Duclos & Barasch, 2014; Hong & Chang, 2015; 1 = not at all, 7 = a lot). The results showed successful manipulation, as participants in the high-interdependence condition thought both more about others ($M = 3.17$, $SD = 1.57$) than those in the low-interdependence condition ($M = 2.61$, $SD = 1.41$; $t(126) = 2.01$, $p = .038$, $d = .38$) and less about the self ($M = 3.36$, $SD = 1.55$) than those in the low-interdependence condition ($M = 3.92$, $SD = 1.51$, $t(126) = 2.06$, $p = .042$, $d = .37$).

In the main study, participants were randomly assigned to two incentive structure conditions (see web appendix E). In the reward-referrer condition, the participants were informed that they would receive a snack pack from the brand as a reward if they recommended a friend to buy the new chips from this brand. In the reward-target condition, only the friend would receive a snack pack as a reward. Then, the participants were asked to indicate their referral intention using the four-item, 7-point index used in Study 1 (adapted from Wirtz et al., 2013; $\alpha = .90$).

Next, to test our underlying process, we measured anticipated social concern. To show that our effect was not driven by the specific scales used in Study 2, we used a different scale that has also been validated by prior research. Specifically, in the current study, we utilized two seven-point items adapted from Wang, Zhu and Shiv (2012; fear of negative evaluation measure): “When you make a decision on whether to make a referral, 1) how concerned are you that others will form an unfavorable impression of you, and 2) to what extent are you afraid of being negatively evaluated by others?” (1 = not at all, 7 = very much, $r = .84$, $p < .001$). Basic demographic information (gender, age, and race) was then collected.

Results

Referral intention A 2×2 ANOVA on referral intention showed a significant interaction between self-construal and

incentive structure ($F(1, 283) = 8.40$, $p = .004$, $\eta_p^2 = .03$; see Fig. 3a). Planned contrast showed that in the low-interdependence condition, participants were marginally more likely to make a referral in the reward-referrer condition ($M = 4.47$, $SD = 1.38$) than in the reward-target condition ($M = 4.09$, $SD = 1.36$; $t(283) = -1.88$, $p = .051$, $d = .28$). The effect was reversed in the high-interdependence condition, where participants were more likely to make a referral in the reward-target condition ($M = 4.73$, $SD = .99$) than in the reward-referrer condition ($M = 4.23$, $SD = 1.32$; $t(283) = 2.21$, $p = .028$, $d = .43$). The main effects of self-construal ($F(1, 283) = 1.71$, $p = .192$, $\eta_p^2 = .006$) and incentive structure ($F(1, 283) = .13$, $p = .722$, $\eta_p^2 < .001$) were both insignificant.

Anticipated social evaluation A 2×2 ANOVA on anticipated social evaluation showed a significant interaction between self-construal and incentive structure ($F(1, 283) = 4.12$, $p = .043$, $\eta_p^2 = .014$; see Fig. 3b). Planned contrasts showed that in the low-interdependence condition, anticipated social evaluation did not differ in the different incentive structure conditions ($M_{\text{reward-referrer}} = 4.62$, $SD = 1.74$; $M_{\text{reward-target}} = 4.84$, $SD = 1.56$; $t(283) = .87$, $p = .383$). However, in the high-interdependence condition, participants were marginally more concerned about negative evaluation in the reward-referrer condition ($M = 5.23$, $SD = 1.35$) than in the reward-target condition ($M = 4.69$, $SD = 1.59$; $t(283) = -1.95$, $p = .052$, $d = .37$). Neither self-construal ($F(1, 283) = 1.58$, $p = .210$, $\eta_p^2 = .006$) nor incentive structure ($F(1, 283) = .724$, $p = .396$, $\eta_p^2 = .003$) yielded a significant main effect.

Moderated mediation To test whether our effect was driven by social concerns, we again performed a moderated mediation analysis. We used Hayes’s (2017) PROCESS Model 8 (with 5000 bootstrapped samples) with $X =$ incentive structure (0 = reward-referrer, 1 = reward-target), $M =$ anticipated social evaluation, $Y =$ referral intention, and $W =$ self-construal (0 = low interdependence, 1 = high interdependence).

The results showed that the interactive effect of incentive structure and self-construal on referral intention was mediated by anticipated social evaluation (indirect effect: $a \times b = .19$, $se = .11$; 95% CIs [.01, .43]). Namely, there was a significant interaction between incentive structure and self-construal on anticipated social evaluation ($a_{\text{inter}} = -.76$, $se = .37$, $t(283) = -2.03$, $p = .043$; 95% CIs [-1.49, -.02]), and anticipated social evaluation was negatively related to referral intention ($b = -.25$, $se = .05$, $t(282) = -5.51$, $p < .001$; 95% CIs [-.35, -.16]; see Fig. 3c for path coefficients). For participants in the high-interdependence condition, the reward-target plan was seen as more socially favorable than the reward-referrer plan, which led to more referrals (indirect effect = .14, $se = .07$, 95% CIs [.01, .30]). However, for participants in the low-interdependence condition, anticipated social evaluation did

not mediate referral intention (indirect effect = $-.06$, $se = .07$, 95% CIs $[-.21, .07]$).

Discussion

While Studies 1–2 provided initial support for our theory by measuring self-construal and using culture as a proxy for self-construal, the current study manipulated self-construal via ad exposure to rigorously test our effect and to show the importance of self-construal in dictating the effectiveness of reward-target (vs. reward-referrer) incentive plans. While our manipulation of self-construal was based on prior research, the specific wording used by this manipulation (“give yourself ...” vs. “give your family and friends...”) was amenable to demand effects in our context. Thus, we conducted two additional studies (supplemental Studies 3 and 4 [web appendices F and G]) that used a different manipulation of self-construal and replicated the results. We believe that these studies manipulating self-construal complement the rest of our empirical package, and together provide support for our predictions.

Study 4: Moderation by opacity of referrals: Public vs. private referrals

Study 4 was conducted with two goals. First, it aimed to provide additional support for our underlying mechanism using a moderation-of-process design (Spencer et al., 2005). Second, it sought to examine how important marketplace variables could moderate our effect to provide actionable insights. Specifically, if highly interdependent people prefer reward-target plans because they believe that such plans are socially better regarded than reward-referrer plans (i.e., are better for impression management), then variables that minimize impression management goals, for example, by making the context private (Ariely et al., 2009) rather than public (as in the case of our previous studies), should attenuate our effect (H3).

Method

A total of 418 participants (61.5% female; $M_{age} = 38.02$ years, $SD_{age} = 13.04$) from MTurk completed the 2 (incentive structure: reward-referrer vs. reward-target) \times 2 (opaqueness of referral information: transparent [control] vs. opaque) \times self-construal (measured) study for pay.

The participants were randomly assigned to one of four between-subject conditions. In all conditions, the participants imagined that they had decided to open a credit card with a bank and that the bank was running an incentive program. In the reward-referrer condition, the participants were informed that if they successfully referred a friend or colleague to open a credit card with this bank, they (the referrer) would receive

\$50. In the reward-target condition, the target would receive \$50.

In this transparent referral information condition (which is the context of our previous studies), the participants were told that both the participant and their friend/colleague would know who made the referral and who received the reward; in the opaque condition, the participants were informed that their friends or colleagues would be unable to trace the reward to the referrer (see web appendix H for full instructions). Then, the participants were asked to indicate their referral intention on a three item index adapted from Jin and Huang (2014): 1) “Do you intend to recommend to your friend that he or she open a credit card with this bank?” (1 = definitely not; 7 = definitely), 2) “How likely are you to recommend to your friend/colleague that he or she open a credit card with this bank?” (1 = very unlikely, 7 = very likely), and 3) “How strongly do you feel about recommending to your friend/colleague that he or she open a credit card with this bank?” (1 = not at all, 7 = very much, $\alpha = .93$). Then, the participants completed Singelis’s (1994) self-construal scale as described in Study 2. As before, and following prior research (e.g., Hong & Chang, 2015; Wu et al., 2011), dominant self-construal was calculated as the difference between the participants’ interdependence ($a = .75$, $M = 4.66$, $SD = .75$) and independence scores ($a = .73$, $M = 5.13$, $SD = .74$), where -6 refers to low interdependence and $+6$ to high interdependence.

Results

To test our predictions, we conducted regression analyses using Hayes’s (2017) PROCESS Model 3 ($X =$ incentive structure [0 = reward-referrer 1 = reward-target], $M =$ self-construal [mean-centered], $W =$ information type [0 = transparent, 1 = opaque], $Y =$ referral intention) with 5000 bootstrapping iterations. The results showed a significant three-way interaction among incentive structure, self-construal and information type ($b = -.89$, $se = .36$, $t(410) = -2.48$, $p = .014$). Decomposing this three-way interaction, we found that for those in the transparent referral information condition, the results replicated our previous findings and showed a significant incentive structure by self-construal interaction ($b = .54$, $se = .26$, $t(410) = 2.09$, $p = .037$). The spotlight analysis⁷ showed that the participants who scored low in interdependence (2 SD below mean-centered self-construal) were more likely to make referrals when they received the reward than when others received the reward ($b = -1.19$, $se = .57$, $t(410) = 2.09$, $p = .037$). However, participants

⁷ Hayes (2017) indicated that the Johnson–Neyman method cannot be used for the PROCESS Model 3 if the moderator is dichotomous (as in our case). Therefore, a spotlight analysis was conducted to provide insight into the identified interaction.

high in interdependence (2 SD above mean-centered self-construal) were marginally more likely to make referrals when others received the reward than when they received the reward ($b = .93$, $se = .56$, $t(410) = 1.67$, $p = .095$). Figure 4a illustrates these effects, plotted in accordance with Aiken and West (1991).

In the opaque referral information condition, the interaction between incentive structure and self-construal was no longer significant ($b = -.35$, $se = .25$, $t(410) = 1.40$, $p = .161$), and there was only a main effect of incentive structure, where everyone was more likely to make referrals under the reward-referrer than under the reward-target referral plans ($b = -.70$, $se = .25$, $t(410) = -2.83$, $p = .005$; see Fig. 4b). These results supported H3 and showed that when impression management goals are minimized, as when referral information is private, the effect is attenuated.

In addition, there was a marginally significant interaction between incentive structure and the opacity of referral information ($b = -.57$, $se = .35$, $t(410) = -1.65$, $p < .10$), where the reward-referrer incentive plan was more effective than the reward-target incentive plans ($b = -.70$, $se = .25$, $t(410) = -2.83$, $p = .005$) in the opaque referral condition; however, there was no difference in the transparent referral information condition ($b = -.13$, $se = .24$, $t(410) = -.53$, $p = .599$). Finally, there was a significant main effect of the incentive structure where the reward-referrer plan was more effective ($b = -.41$, $se = .17$, $t(410) = -2.36$, $p = .019$) and a marginally significant main effect of information opacity where referral intention was higher in the transparent than in the opaque referral condition ($b = -.30$, $se = .17$, $t(410) = -1.73$, $p = .084$). No other effect was significant (all $ps > .52$).

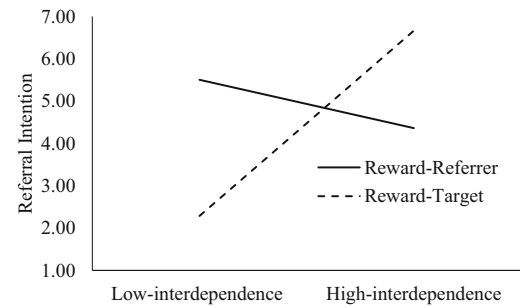
Discussion

Study 4 used a moderation-of-process design (Spencer et al., 2005) to test our theory. Namely, our manipulation of referral opacity (vs. transparent referrals) disrupted the connection between the reward-target plan and the appeasement of social concerns, which in turn moderated our effect, and highly interdependent consumers no longer preferred the reward-target plan over the reward-referrer plan.

Study 5: Moderation by product-liking risk

Similar to Study 4, Study 5 aimed to test the underlying mechanism and to show an additional boundary condition of the effect. As mentioned in the exposition, while interdependent consumers prefer reward-target incentive plans because they think that those plans are more socially appealing, interdependent consumers are also highly sensitive to social risk. Thus, in cases where reward-target plans are associated with high

A) Transparent referral information condition



B) Opaque referral information condition

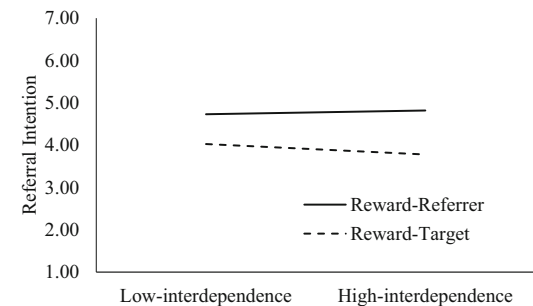


Fig. 4 Interactive effect of incentive structure, self-construal and transparency of incentive on referral intention in Study 4. (Panel a) Transparent referral condition. (Panel b) Opaque referral information condition

social risk, as when there is high uncertainty whether the target will like the product, the effect is likely to be attenuated (H4). The current study focused on restaurant referrals because the restaurant sector is a heavily studied industry where referrals are common (Wirtz et al., 2013); more importantly, whereas our prior studies were rooted mostly in the product context, the current study generalized the effect to services.

Method

Undergraduate participants were recruited from two universities: a major university in mainland China ($N = 113$) and a major private university in the southeastern US ($N = 147$). Following the same inclusion standards of previous studies, our final sample comprised 113 Asian undergraduate students (58.4% female; $M_{age} = 20.89$ years, $SD_{age} = 1.78$) and 127 American undergraduate students (57.5% female; $M_{age} = 20.45$ years, $SD_{age} = 1.57$). Participants completed the 2 (incentive structure: reward-referrer vs. reward-target) \times 2 (self-construal: low interdependence [American students] vs. high interdependence [Asian students]) \times 2 (product-liking risk: low vs. high) between-subjects study. Students from the Chinese university were paid a small fee, and students from the US university received course credit for their participation.

The participants imagined that they visited a new restaurant that was encouraging customers to refer friends. Feick and Higie (1992) posited that high-preference-heterogeneity

categories pose greater social risk; thus, to manipulate social risk (and hence the perceived social consequences), we manipulated the uncertainty of liking. In all conditions, the participants were told that given the food offerings and the location of the restaurant, on average, people tended to like the restaurant. Those in the high-product-risk condition were then told that some people might really like the restaurant whereas others might really dislike it; those in the low-product-liking risk condition were told that there would be little variation in people's opinions of the restaurant.

The incentive structure manipulation was similar to that in previous studies. In the reward-referrer condition, the participant would receive the reward (a free course), whereas in the reward-target condition, the participant's friend/colleague would receive the free course (see web appendix I for full instructions). Referral intention was then measured with the same items used in Study 1 ($\alpha = .87$).

Results

A $2 \times 2 \times 2$ ANOVA of the composite referral intention revealed a marginally significant three-way interaction ($F(1, 232) = 3.76, p = .054, \eta_p^2 = .02$). Decomposing this interaction, the results showed that when the product-liking risk was low, the basic effect replicated, where we see a significant interaction between incentive structure and self-construal ($t(232) = 3.80, p < .001$; see Fig. 5a). Low-interdependent participants (American students) were more likely to make referrals when they received the reward ($M = 5.16, SD = 1.26$) than when the target received the reward ($M = 4.35, SD = 1.31$; $t(232) = 2.75, p = .006, d = .63$). In contrast, high-interdependent participants (Asian students) were more likely to make referrals when the target received the reward ($M = 4.98, SD = 1.00$) than when they themselves received the reward ($M = 4.14, SD = .85$; $t(232) = 2.64, p = .009, d = .91$).

When the product-liking risk was high, however, the interaction between incentive structure and self-construal was no longer significant ($t(232) = 1.08, p = .280$; see Fig. 5b), and there was only a main effect of incentive structure ($M_{\text{reward-referrer}} = 4.56$ vs. $M_{\text{reward-target}} = 4.13, t(232) = 2.27, p = .024, d = .34$). Specifically, given that risk lessened the anticipated social benefits associated with reward-target referrals, high-interdependent participants behaved similarly to low-interdependent participants and were more likely to make a referral in the reward-referrer condition. These findings support H4.

Finally, there was a significant interaction between incentive structure and self-construal ($F(1, 232) = 12.00, p = .001, \eta_p^2 = .05$), where there was a significant effect of incentive structure for participants low in interdependence ($M_{\text{reward-referrer}} = 5.09$ vs. $M_{\text{reward-target}} = 4.34, F(1, 232) = 12.60, p < .001, \eta_p^2 = .05$) but not for those high in interdependence

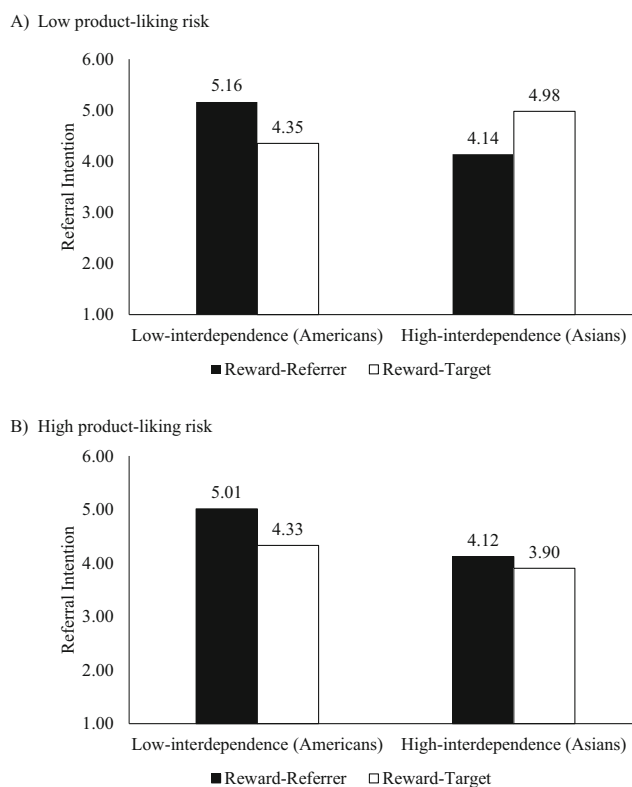


Fig. 5 Interactive effect of incentive structure, self-construal and product-liking risk on referral intention in Study 5. (Panel a) Low product-liking risk. (Panel b) High product-liking risk

($M_{\text{reward-referrer}} = 4.13$ vs. $M_{\text{reward-target}} = 4.44, F(1, 232) = 1.99, p = .160, \eta_p^2 = .01$). There was also a main effect of self-construal ($F(1, 232) = 7.71, p = .006, \eta_p^2 = .03$), with participants low in interdependence being more likely to make referrals than participants high in interdependence, and a main effect of product-liking risk ($F(1, 232) = 4.36, p = .038, \eta_p^2 = .01$), with low risk resulting in higher referrals than high risk. No other effect was significant (all $ps > .13$).

Discussion

Complementing Study 4, the current study provided additional evidence that interdependent people's preference for referral programs that reward the target instead of the referrer is driven by social concerns (H2). Specifically, Study 5 manipulated product-liking risk (high vs. low risk) and showed that when there is a high product-liking risk, interdependent consumers no longer prefer reward-target plans, given that such plans are now decoupled from the appeasement of social concerns.

Study 6: The reward-both case

While our empirical exploration focuses on reward-referrer versus reward-target plans, one might wonder how these one-sided plans compare to two-sided (i.e., reward-both) plans

that are commonly used in practice. Study 6 examined this question and provided an initial benchmark.

Method

A total of 478 participants (47.5% female; $M_{\text{age}} = 38.47$ years, $SD_{\text{age}} = 12.57$) from MTurk completed the 4 (incentive structure: reward-referrer vs. reward-target vs. reward-both-small vs. reward-both-large) \times self-construal (measured) study for pay.

The participants were randomly assigned to one of four between-subject conditions: reward-referrer (\$50), reward-target (\$50), reward-both-small (\$25/each) and reward-both-large (\$50/each). The study scenario was identical to that of Study 4 except for the addition of the two reward-both conditions. We manipulated the size of the payout in the reward-both conditions (small vs. large) because prior work has shown that the monetary size of an incentive affects referral (Ahrens et al., 2013; Wirtz et al., 2019) and we sought to keep the size of the incentive constant across the conditions. However, there are two ways to think about the incentive size: constant at the total payout level or constant at the per-person level; our two reward-both conditions allowed us to explore both possibilities. In the reward-both-small condition (\$25/each), the total incentive offered was \$50, which is equal to the total payouts in the reward-referrer and reward-target plans (\$50). In the reward-both-large condition (\$50/each), while the total payout (\$100) was higher than the total payouts in the reward-referrer and reward-target conditions (\$50), the per-person payout remained constant (\$50/person; see web appendix J for the full instructions).

The participants were asked to indicate their referral intention using the same items used in Study 4 ($\alpha = .94$). To show that the effect was not unique to the specific self-construal scale used thus far (Singelis's, 1994 24-item scale), we measured self-construal using Triandis and Gelfand's (1998) 16-item individualism ($\alpha = .77$, $M = 4.94$, $SD = .93$) and collectivism ($\alpha = .81$, $M = 5.22$, $SD = .90$) scale, which has also been widely used and well validated in prior research (Lalwani et al., 2006; Lalwani & Shavitt, 2009, 2013). Participants' chronic dominant self-construal was calculated, where a higher score corresponds to greater interdependence ($-6 = \text{low interdependence}$, $6 = \text{high interdependence}$; $M = .29$, $SD = 1.15$). Then, basic demographic information (gender, age, and race) was collected.

Results

Because the incentive structure in this study had four levels, we conducted four parallel regression analyses using Hayes's (2017) PROCESS Model 1 by assigning different levels as the baseline group to obtain a complete picture of the effects (see

Table 3a for coding). The interactions between the condition coding and self-construal are displayed in Table 3b

To decompose the significant interaction in each regression listed in the table, we conducted a spotlight analysis⁷ (see Fig. 6). We summarized the planned contrasts in these four regression analyses as follows.

Among participants low in interdependence (2 SD below the mean-centered self-construal), the reward-referrer plan was more effective than the reward-target plan ($b = 1.40$, $se = .51$, $t(470) = 2.76$, $p = .006$). The reward-both-large plan (where each obtained \$50) was as effective as the reward-referrer plan ($b = -.18$, $se = .48$, $t(470) = -.37$, $p = .712$) and more effective than the reward-target plan ($b = 1.22$, $se = .51$, $t(470) = 2.41$, $p = .016$). The reward-both-small plan fell somewhere in the middle and did not significantly differ from the three other conditions (all $ps > .15$).

Among participants high in interdependence (2 SD above the mean-centered self-construal), the reward-target plan was more effective than the reward-referrer plan ($b = 1.48$, $se = .52$, $t(470) = 2.86$, $p = .004$). The reward-both-large plan was as effective as the reward-target plan ($b = -.17$, $se = .48$, $t(470) = -.72$, $p = .718$) and more effective than the reward-referrer plan ($b = 1.30$, $se = .48$, $t(470) = 2.74$, $p = .006$). The reward-both-small plan again fell somewhere in the middle and did not significantly differ from the three other conditions (all $ps > .11$).

A visual inspection of Fig. 6 provides additional insights. The effectiveness of the reward-target (vs. reward-referrer) plan depended on self-construal. The reward-both plans appeared to be unaffected by self-construal and showed a main effect shift based on the size of the incentive.

Finally, there was a main effect of incentive structure ($F(3,474) = 2.80$, $p = .040$), where the effect of the reward-both-large incentive was superior to those of the three other incentive structures (all $ps < .023$); there was no difference among the effects of three other plans (all $ps > .796$).

Discussion

This study extended our exploration of the incentive structure and provided insight on how each of our focal incentive plans (reward-referrer and reward-target) compares to the reward-both plans. First, we replicated the basic identified effect, namely, that reward-target plans are more effective than reward-referrer plans among those high rather than low in interdependence. Second, the effectiveness of the reward-both plans is less affected by self-construal than the effectiveness of our two focal incentive plans, but is affected by the size of the incentive. Third, the current study suggested that in cases where self-construal can be easily observed or proxied (e.g., in a sample of Asian consumers [high in interdependence]), one-sided (reward-target or reward-referrer) incentive plans could be an effective referral strategy if they are properly

Table 3 A and B variable coding (panel A) and interactions between self-construal (mean-centered) and incentive structure (panel B) on referral intention

a: Variable Coding				
	Regression 1	Regression 2	Regression 3	Regression 4
Baseline Group	Reward-both-small	Reward-both-large	Reward-referrer	Reward-target
X1	0=Reward-both small, 1=Reward-both-large	0=Reward-both-large, 1=Reward-both-small	0=Reward-referrer 1=Reward-both-large	0=Reward-target 1=Reward-both-large
X2	0=Reward-both-small, 1=Reward-referrer	0=Reward-both-large, 1=Reward referrer	0=Reward-referrer 1=Reward-both-small	0=Reward-target 1=Reward-referrer
X3	0=Reward-both small, 1=Reward-target	0=Reward-both-large 1=Reward-target	0=Reward-referrer 1=Reward-target	0=Reward-target 1=Reward-both-small
b: Interactions between self-construal and incentive structure				
X1 × Self-construal	b=-.009, se=.19, t(470)=-.05, p=.962	b=.009, se=.19, t(470)=.05, p=.962	b=.32, se=.18, t(470)=1.74, p=.082	b=-.30, se=.19, t(470)=-1.58, p=.116
X2 × Self-construal	b=-.33, se=.20, t(470)=-1.69, p=.092	b=-.32, se=.18, t(470)=-1.74, p=.082	b=.33, se=.20, t(470)=1.69, p=.092	b=-.62, se=.20, t(470)=3.12, p=.002
X3 × Self-construal	b=.29, se=.20, t(470)=1.45, p=.148	b=.30, se=.19, t(470)=1.58, p=.116	b=.62, se=.20, t(470)=3.12, p=.002	b=-.29, se=.20, t(470)=-1.45, p=.148

targeted (i.e., if reward-target [reward-referrer] incentives are used when the referrer is high [low] in interdependence). If self-construal cannot be easily deduced and reward-both incentives are used, incentive size (\$50 vs. \$25) drives referral behavior.

General discussion

Incentivized WOM referral programs have become increasingly popular across the globe. In practice, companies predominantly use two-sided incentive plans (which reward both the referrer and the target). However, two-sided incentive plans may come with higher financial and effort costs (Mosley, 2021). In this paper, we examined alternative one-sided incentive plans—reward-referrer versus reward-target—from a cross-cultural perspective and showed that when the referrer's self-construal can be deduced, the use of one-sided incentives can be optimized by partnering reward-target

(reward-referrer) incentives with consumers who are high (low) in interdependence. This effect arises because highly interdependent consumers are sensitive to the social consequences of the referral and perceive reward-target plans as more socially appealing than reward-referrer plans. Furthermore, we explored marketplace-relevant moderators such as the opacity of referrals (public vs. private) and product risk (high vs. low product-liking risk) and showed when and why the effect is moderated.

Theoretical contributions

The current work makes a number of theoretical contributions. First, it addresses the call to explore WOM from a cross-cultural perspective (Verlegh et al., 2013). Although there is growing research examining the effectiveness of incentives in encouraging referrals (Kornish & Li, 2010; Ryu & Feick, 2007; Wirtz & Chew, 2002), little is known about how these results are unique to the cultural context. Our work reveals cross-cultural differences in the effectiveness of different incentivized WOM plans as a function of self-construal. In addition, self-construal not only varies across countries but could also be an individual difference variable that can be used as a segmentation tool to account for consumer heterogeneity and thus increases the effectiveness of incentivized WOM within the same culture. More broadly, in addition to being the first paper to examine incentivized WOM from a cross-cultural perspective, this study is one of the first to adopt a cross-cultural perspective to study WOM in general (see Zhang et al., 2014 for a notable exception).

Second, this paper systematically explores the effectiveness of different one-sided (reward-target vs. reward-referrer)

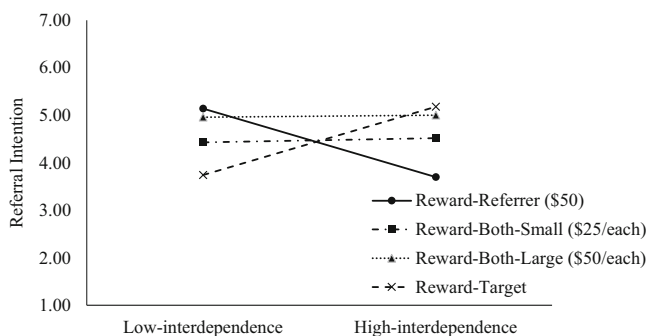


Fig. 6 Interactive effect of incentive structure and self-construal on referral intention in study 6

incentive plans. Whereas prior work has focused on the effects of the incentive size and incentive type (money vs. voucher) on WOM (Jin & Huang, 2014; Ryu & Feick, 2007; Wirtz et al., 2013), research on incentive structure, particularly research comparing the effectiveness of different one-sided incentive plans, is relatively sparse, and its findings are mixed (Ahrens et al., 2013; Bapna et al., 2014; Gershon et al., 2020). Our results suggest that self-construal could be one variable that explains these differences in prior research findings.

Third, this work sheds light on some of the psychological mechanisms involved in incentivized WOM. Although incentives can influence referral behavior by appealing to people's desire for money or free goods, they can also do so by appealing to social concerns. We show that the salience of financial versus social benefits depends on self-construal. Consumers low in interdependence tend to care more about financial than about social rewards, whereas consumers high in interdependence tend to care more about social than financial rewards.

Limitations and directions for future exploration

While we conducted a series of studies to test our theory, our current research has limitations that offer fruitful avenues for future research.

First, self-construal is just one dimension of cross-cultural difference. Easterners and Westerners also differ in other dimensions such as time orientation, power distance, and indulgence versus restraint (Hofstede, 1991, Hofstede, 2001). It would be worthwhile to explore the effect of these additional differences on consumer reactions to incentivized referral programs and discern when and why certain dimensions might be more or less important. For instance, time orientation might matter more in the decision over whether rewards should be cumulative or standalone (e.g., whether the referrer should receive \$50 after 5 referrals or \$10 per referral for up to 5 referrals), while indulgence versus restraint might matter more in the decision over whether the reward should be framed as a bonus or a discount (e.g., whether the referrer should receive a \$25 gift or a \$25 discount).

Second, although the initial evidence suggests that one-sided incentive plans might be as effective as reward-both plans (which cost twice as much) when the target market's self-construal is known or can be easily inferred (Study 6), additional work is required to have a more systematic understanding of the effectiveness of reward-both plans in comparison to that of one-sided reward plans from both the referrer and target perspectives.

Finally, the present research focused on the referral stage of incentive referral plans. Future research could examine the effectiveness of one-sided incentive plans from the target's perspective. Shen et al. (2011), for instance, found that Asian consumers are more likely to refuse a small gift than Western participants due to concerns about feeling indebted.

Therefore, it is possible that there is a sender-receiver asymmetry whereby interdependent consumers are *more* likely to make a referral when the target receives the reward (reward-target) than when the participants themselves receive the reward (reward-referrer) and the target *less* likely to subscribe to a product when they will receive a reward (reward-target) than the referrer would receive a reward (reward-referrer).

Managerial implications

The current research provides several practical suggestions for marketers. Two-sided incentive plans are likely favored by marketers since it is often difficult to know consumers' self-construal and these plans reward both parties involved in the referral program, which presumably ought to increase overall referrals. That said, for firms limited by cost and have thus turned to one-sided referral plans, our results show that the specific one-sided incentive plan to implement should be chosen while taking into account the target market's self-construal. Reward-target plans are more effective than reward-referrer plans among potential referrers who are highly interdependent (e.g., Asian and Latin American consumers); when self-construal cannot be easily deciphered, the firm could induce self-construal through marketing messages (see Study 3).

Furthermore, recent research has highlighted the need for greater segmentation and the tailoring of incentivized referral plans (Keiningham et al., 2018; Wirtz et al., 2019). Self-construal varies not only across cultures but also within cultures and thus it can be used as a segmentation variable. Women, for instance, are more likely to be interdependent (Cross & Madson, 1997; Gabriel & Gardner, 1999) and should thus respond better to reward-target (vs. reward-referrer) incentive plans. Furthermore, incentive plans should also be tailored based on product category. For product categories that are likely to attract interdependent consumers (e.g., charities, donations, prosocial products; Winterich & Barone, 2011), reward-target incentive plans are likely more effective than reward-referrer incentive plans in generating referrals.

Our paper also suggests that context-specific variables can moderate our effect by influencing social concerns. When referral information is opaque (i.e., the target is unable to trace the reward to the referrer), people high in interdependence also prefer reward-referrer incentive plans (similar to people low in interdependence, Study 4), presumably because they no longer anticipate positive social consequences from making referrals. Thus, in contexts in which the incentive referral is anonymous, reward-referrer incentive plans are likely to be more effective in encouraging referrals than reward-target incentive plans, regardless of consumers' self-construal. For example, for sensitive or embarrassing products and services such as condoms, adult diapers, lice shampoo, psychological counseling services, etc., the potential referrer might worry about the target knowing who they are. In these cases, where

people anticipate little social reward, firms could offer anonymous referrals that reward the referrer.

In addition, in contexts with high preference heterogeneity (Study 5), people high in interdependence no longer prefer reward-target plans. Therefore, for product categories where people have different preferences (e.g., haircuts, art) and for product categories where people have low product knowledge (e.g., new inventions, unique/rare products), reward-referrer incentive plans are likely to be more effective than reward-target plans in generating referrals, even among those with a highly interdependent orientation. One measure of product preference heterogeneity is the dispersion of review ratings (Bond et al., 2019); and so for products with high review dispersion, the brand is likely to elicit more referrals with reward-referrer (vs. reward-target) incentive plans.

Furthermore, although not the focus of the present research, our findings provide some suggestions concerning the adoption of two-sided versus one-sided incentive plans. Specifically, in cases where we can observe or proxy self-construal the current research suggests that a specific one-sided incentive plan (e.g., reward-target) might be as effective as a two-sided incentive plan that is twice as costly (Study 6). However, in cases where it is difficult to observe self-construal, reward-both incentive plans might be more applicable, with the size of the incentive (e.g., \$50 vs. \$25) dictating referral behavior.

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Declarations

Conflict of interest The authors declare that they have no conflict of interest.

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