Psychological drivers of referral reward program effectiveness

Chiara Orsingher
Department of Management, University of Bologna, Bologna, Italy, and

Jochen Wirtz
Department of Marketing, National University of Singapore, Singapore

Abstract

Purpose – Empirical research presents conflicting findings with regards to the effectiveness of referral reward programs (RRPs) and supports two alternative and conflicting views on the effectiveness of incentivizing recommendations. They are, first, a positive effect via perceived attractiveness of the incentive, and second, a negative effect via metaperception of the recommendation. The purpose of this paper is to examine these two opposing psychological mechanisms to reconcile the conflicting findings.

Design/methodology/approach – The authors conducted three experiments. Study 1 tests the base model. Studies 2 and 3 add moderators to test whether each mediating variable operates exclusively on its intended relationship.

Findings – Incentive size enhanced the attractiveness of an incentive, but reduced the metaperception favorability of the recommendation. These two opposing mechanisms operated in parallel, independently and fully mediated the effects of incentive size to likelihood of making a recommendation. Thus, the net impact of incentives on recommendation behavior depended on the relative strengths of these two opposing forces.

Practical implications – The study recommends managers to design RRPs with incentives that recommenders perceive as highly useful (i.e. to increase attractiveness) but have a low face value (i.e. to reduce metaperception concerns) and to target RRPs to strong rather than weak ties.

Originality/value – Our work offers an integrated theoretical account of consumers' responses to incentivized recommendations and provides managerially relevant guidelines for the design of effective RRPs.

Keywords Incentives, Face-value, Metaperception, Referral likelihood, Referral reward program, Tie-strength

Paper type Research paper

Introduction

Referral reward programs (RRPs) are customer acquisition tools that incentivize current customers to refer new customers (Jin and Huang, 2014; Wirtz and Lovelock, 2017, p. 269). RRPs have become ubiquitous; a recent Google search (using the search term "referral reward program") yielded more than 12 million hits. Service firms operate RRPs because they believe such programs offer a cost-effective way to attract new customers (Wirtz and Zeithaml, 2017). The underlying assumption is that making an incentivized recommendation is akin to customers engaging in word-of-mouth (WOM; Wirtz and Chew, 2002), which is attractive, as WOM recommendations are viewed by recipients as credible (Price and Feick, 1984; Sivadas and Jindal, 2017) and trustworthy (Arndt, 1967; Glynn Mangold *et al.*, 1999).

Academic research presents conflicting findings with regards to the effectiveness of RRPs. A number of studies show that incentives can be an effective way to motivate referral behavior because they provide an economic benefit that rewards and compensates for the time and effort recommenders spend in communicating with recommendation recipients (Ryu and Feick, 2007). In contrast, other studies find that incentives can be a barrier to referral behavior when they generate social costs and metaperception concerns, whereby potential recommendation givers worry that recipients view their recommendations as self-interested or even opportunistic (Jin and Huang, 2014; Wirtz *et al.*, 2013).

The present study examines how customer perceptions of the economic benefits and social costs (i.e. favorability of metaperception) associated with referral rewards jointly influence the likelihood to participate in an RRP. We aim with this simultaneous examination to help reconcile the conflicting findings in the literature. In particular, our study shows that incentives activate two opposing psychological mechanisms. First, a positive effect via perceived attractiveness of the incentive on referral likelihood, and second, a negative effect via the favorability of metaperception of the recommendation. Thus, the net impact of incentives on recommendation behavior depends on the relative strengths of these two opposing forces.

The present research also demonstrates that these two processes are independent of one another by showing that two moderators each operate exclusively only on one of the mediating effects. First, the perceived usefulness of the incentive moderates the effect of incentive size on incentive

attractiveness and subsequent likelihood to recommend. For example, a dining voucher for a Japanese restaurant is less attractive for someone who rarely eats Japanese food than for someone who loves it. Second, the degree of tie-strength between the recommendation giver and the receiver moderates the impact of incentive size on favorability of metaperception and subsequent likelihood to recommend. For example, an incentivized referral is unlikely to affect a close relationship where trust has been built, and as a result, recommenders will have low impression management concerns.

In sum, this study contributes to the existing knowledge on RRPs in three ways. First, with respect to prior research, this study offers a more comprehensive explanation of how incentives affect likelihood to recommend. It uncovers that two coexisting and opposing forces act on recommenders when presented with an incentive to recommend and that it is the relative effect of each mediator that determines the recommenders' referral intentions. These two opposing effects were shown to operate independently from one another. Second, the study extends theory by replicating previous findings on the mediational role of favorability of metaperception and also shows that metaperception is not the only mechanism at work linking incentives with intention to recommend. This finding provides a potential explanation for the inconsistent findings in past research. Third, this study provides managerial guidance on the effective design of RRPs with the recommendation to develop incentives that are viewed as highly useful by the recommender (i.e. to increase incentive attractiveness), but do not have a high face value (i.e. to reduce the negative effect on metaperception), and to target RRPs to strong rather than to weak ties when higher face values are involved.

The remainder of this manuscript is organized as follows. First, the manuscript provides a review of the literature and develops the research hypotheses. Next, it describes and reports the findings of the three experimental studies that were used to test the opposing mediational mechanism. Study 1 tests the base model, Study 2 adds to the base model the moderating effects of perceived usefulness and Study 3 the moderating effects of tie-strength. The manuscript concludes with the theoretical and managerial implications.

Literature review and hypotheses

The opposing forces of perceived attractiveness and metaperception

Incentives are generally conceived as an effective way to stimulate recommendation behavior because they provide recommenders with a reward for the effort they make to promote the company's offer to people they know (Jin and Huang, 2014; Wirtz *et al.*, 2013; Ryu and Feick, 2007). However, past research shows conflicting findings regarding the effects of incentives and incentives size on recommendation likelihood.

For example, Ryu and Feick (2007) show that incentives increase referral likelihood of weak brands because consumers of such brands are more sensitive to economic rewards. Their studies also show that the presence of an incentive was sufficient to increase recommendation intentions and that increasing the incentive size did not increase referral likelihood

further. In contrast, Kornish and Li (2010) advance in their theoretical study that incentive size affects recommendations, especially when recommenders have a concern for the receivers' outcome. They suggest that, if recommenders fear that the service might not work well for the recipient, then the incentive should be high enough to compensate for their concern. Jin and Huang (2014) document this effect by showing that when the size of the incentive becomes sufficiently large (i.e. $10 compared to $1), referral likelihood increases because the economic benefit of the monetary reward outweighs the recommenders' perceived social cost (e.g. the risk of providing inappropriate advice).

Other studies conversely question the effectiveness of incentives in stimulating referral behavior altogether. These studies argue that incentives introduce an economic component in a social relationship and might, therefore, alter the (perceived) motivation for making a recommendation. Wirtz *et al.* (2013) and Jin and Huang (2014) demonstrated in some of their experiments that incentives do not stimulate recommendation intentions because they generate the concern to be seen as self-interested and being motivated by the incentive rather than having the best interest of the recommendation recipient at heart. This concern, in turn, reduces recommenders' intention to generate referrals. In sum, past studies do not offer a coherent picture of whether and when incentives and incentives size stimulate referrals.

The present study contends that the conflicting findings in past research can be reconciled by explicitly considering two opposing forces the size of an incentive has on referral likelihood. The first force is positive and involves the attractiveness of the reward. The second force is negative and involves the favorability of the metaperception of the recommendation. An explanation of these rival effects is developed next.

Perceived attractiveness

Large incentives are generally seen as appealing because recommenders' can easily foresee the advantage of receiving one. As such, large incentives should be more attractive and increase recommendation likelihood. In the context of salesforce management, the relationship between the face value of an incentive and its attractiveness has been examined through the lenses of extrinsic motivation theory. Financial incentives are a critical explanatory factor in the salesforce performance literature, typically believed to be highly motivating for the sustained effort of salespeople (Beuk *et al.*, 2014). However, a number of studies have also shown that the same reward can be valued differently by different individuals (Churchill *et al.*, 1979; De Gieter and Hofmans, 2015; Mehta *et al.*, 2000). For example, Norberg (2017) found that salespeople differ in their evaluation of incentive programs that involve points, gift cards and cash.

In a recommendation behavior context, extant studies considered incentive size as a proxy of perceived attractiveness (Wirtz and Chew, 2002; Wirtz *et al.*, 2013; Xiao *et al.*, 2011), and so far, no study has explicitly examined the interplay between the size of an incentive and its perceived attractiveness. Building on the line of reasoning of salesforce management research, it seems reasonable to advance that, whereas it is the firm that determines the face value of the reward, it is the

recommender who makes the subjective assessment of its attractiveness, and it is the perceived attractiveness rather than face value that determines recommendation behavior. Wirtz *et al.* (2013) found in their qualitative study that an attractive incentive was a strong motivator to make recommendations, and attractive incentives were able to motivate people who otherwise showed low intrinsic motivation to recommend. Thus, the effect of the face value of an incentive to recommendation behavior is likely to be mediated by the incentive's perceived attractiveness.

Metaperception

Although rewards have been found to drive recommendation behavior in a number of studies, recent research has noted that introducing a reward changes the nature of the interpersonal communication for both the recommendation giver and recipient (Jin and Huang, 2014). From the perspective of the recommender, an economic reward for making a recommendation might result in a trade-off between conflicting motives of self-interest and protection of a relationship (Kornish and Li, 2010). Incentives provide the referral giver with a stake in the receiver's potential purchase decision, and may, therefore, make the recommendation seem less impartial (Wirtz *et al.*, 2013; Xiao *et al.*, 2011). Together, these studies suggest that incentives might trigger in the recommender's mind a process called metaperception that subsequently regulates their behavior (Goffman, 1959).

Metaperception refers to individuals assessing the opinion others might form of them and their behavior (Schlenker, 1980; Laing *et al.*, 1966). Individuals generally prefer to be seen in a socially positive way (Schlenker and Leary, 1982). Therefore, before individuals engage in a behavior (e.g. makes an incentivized referral), they are likely to automatically activate a metaperception process to assess how this behavior will be perceived by the other person. If individuals believe that the behavior would be perceived unfavorably, then they will be less likely to execute that behavior.

In an RRP context, the extrinsic motives induced through incentives may make a recommendation seem less impartial and independent. Thus, rewards entail a risk; recommenders who place importance on what potential recipients think about them and their recommendations are likely to become more careful if they believe that their recommendations may generate a poor impression (Jin and Huang, 2014; Wirtz *et al.*, 2013; Tuk *et al.*, 2009; Xiao *et al.*, 2011). Wirtz *et al.* (2013) found that recommendation behavior is driven by metaperception, which is negatively affected by the presence and size of an incentive. Similarly, Jin and Huang (2014) found that monetary incentives increase consumer's social costs. That is, recommenders fear to be seen as being motivated by an incentive to the detriment of the social relationship. High social costs, in turn, have a negative effect on the likelihood of making a referral.

This study further tests the intervening role of metaperception in the relationship between incentives and likelihood to recommend (Wirtz *et al.*, 2013). Furthermore, it extends previous research by explicitly modeling and testing the opposing forces of perceived attractiveness and favorability of metaperception on likelihood to recommend in the base model. Thus, we advance:

H1. The impact of incentive size on likelihood to recommend is mediated by two opposing effects, whereby a larger incentive increases perceived attractiveness, which in turn has a positive effect on likelihood to recommend, and a larger incentive has a negative effect on favorability of metaperception, which in turn has a negative effect on likelihood to recommend.

To establish the independence of the two opposing forces in the base model advanced in *H1*, the analysis examines one moderator for each of the forces in two extended models, namely, the usefulness of the incentive and tie-strength which are discussed in the following sections. An overview of the base model and its extensions is shown in Figure 1.

Perceived usefulness as moderator

Traditionally, the concept of perceived usefulness has been studied in the context of technology acceptance as a key dimension in understanding consumer willingness to adopt new technologies. In this domain, perceived usefulness is the degree to which an individual believes that using a particular

Figure 1 The model and its extensions
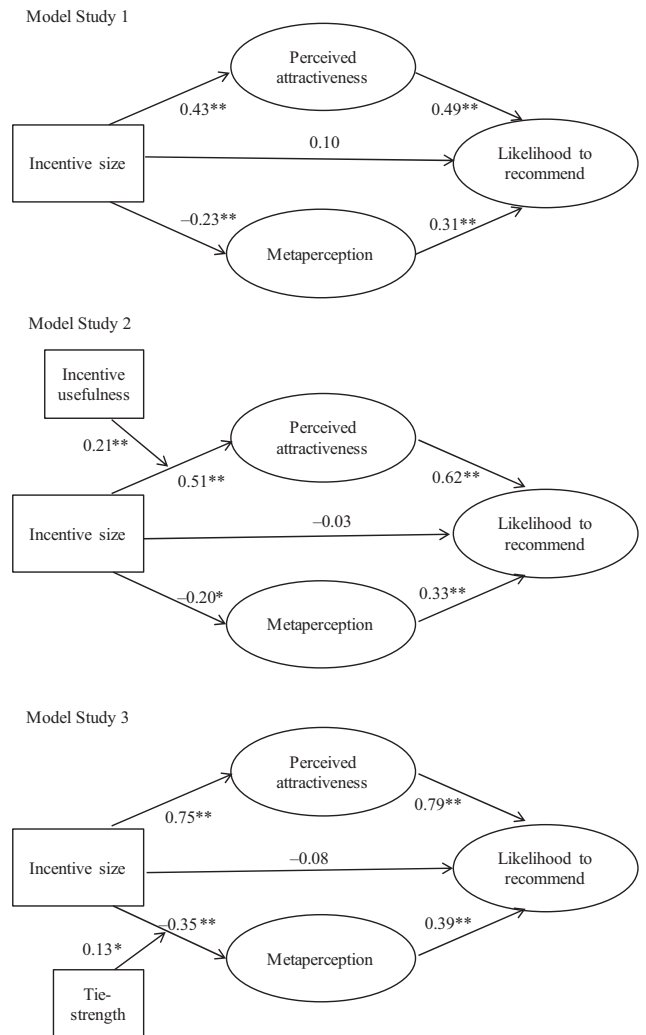
technology enhances his or her performance (Davis, 1989; Segars and Grover, 1993). In a consumer choice context, Sela and Berger (2012) show that consumers' purchase decisions are influenced by the degree to which a product's features are perceived as useful and providing benefits.

It can be argued that in an RRP context, when presented with an incentive, recommenders evaluate the extent to which the incentive provides them with a benefit. Some customers may perceive an incentive as being useful because it addresses their needs and therefore perceive it as more attractive, while others may perceive that they have little use for the incentive and, therefore, perceive it as less attractive. The size of the incentive is determined by the company and its usefulness by the consumer's belief in the existence of a positive use–performance relationship (Davis, 1989). As such, the size of an incentive (e.g. a $10 versus a $50 dining voucher) and the usefulness of an incentive (e.g. to a customer who loves Japanese dining versus someone who does not eat Japanese food) are two independent constructs. Therefore, although the size of an incentive is likely to naturally correlate with its attractiveness, this relationship can be moderated by the perceived usefulness of the incentive. Formally:

H2. Perceived usefulness of an incentive moderates the effect of incentive size on perceived attractiveness and subsequent likelihood to recommend. Specifically, the positive effect of incentive size on the perceived attractiveness increases as the perceived usefulness of an incentive increases.

Tie-strength as moderator

Recommendations can occur among people of different degrees of tie-strength, ranging from strong tie relations (e.g. a close friend) to weak tie relations (e.g. a seldom-contacted acquaintance or colleague at work; Brown and Reingen, 1987). Wirtz *et al.* (2013) showed that incentives generate higher metaperception concerns in weak-tie relationships where people do not know each other well. Here, recommenders fear that even a minor act like a referral can shape interpersonal evaluations. Conversely, metaperception concerns are weaker when strong ties are involved, as recommenders believe that an incentivized recommendation will not affect a close relationship that has been built over a long period of time and where trust has been built. That is, recommenders will be less worried about impression management as they believe that a simple act like a recommendation will not change the opinion that their strong ties hold about them. Therefore, linking to past research, metaperception concerns should be reduced when a recommendation is made to a strong rather than to a weak tie relation as relationship closeness mitigates the worry of conveying an unfavorable impression (Wirtz *et al.*, 2013; Berger, 2014). The following hypothesis follows:

H3. Tie-strength moderates the effect of incentive size on favorability of metaperception and subsequent likelihood to recommend. Specifically, the negative effect of incentive size on favorability of metaperception decreases as tie-strength increases.

Overview of the studies

Three experimental studies were used to test the hypotheses. Study 1 tests the base model which examines how perceived attractiveness of the incentive and favorability of metaperception operate as different mediator mechanisms on referral likelihood (*H1*). Study 2 replicates the base model in the same setting and extends Study 1 by testing the moderating role of incentive usefulness on the relationship between the incentive size and perceived attractiveness (*H2*). Study 3 again builds on the base model and extends it by examining the moderating role of tie-strength on the effect of incentive size on favorability of metaperception (*H3*).

All studies were set in contractual service settings. Studies 1 and 2 used a mobile phone services context, and Study 3 a retail banking setting. All settings are characterized by complex service offerings that are often difficult for potential customers to compare. Some of the critical features of these services (e.g. customer support services and their responsiveness) are based on experience qualities that are more easily assessed through WOM as compared to traditional marketing communications. Finally, these service contexts have been used in past RRP studies (Schmitt *et al.*, 2011; Ryu and Feick, 2007; Ramaseshan *et al.*, 2017), and they are familiar and relevant to our respondents and are not gender-specific (Ryu and Feick, 2007).

Study 1: testing the base model

Method

Study 1 used a cell phone service as research context, as conversations and recommendations regarding phone providers and plans occur frequently. This study used a between-subject factorial design to manipulate incentive size. An experimental scenario approach was considered appropriate for several reasons. First, scenarios minimize memory bias. Second, scenarios reduce problems involving the effect of personal circumstances with regard to the research context. Third, this method enhances internal validity by controlling extraneous and manipulated variables and reduces random noise in the experiment by providing a standardized setting for all respondents (Cook and Campbell, 1979).

Respondents

A total of 88 questionnaires were collected through intercept surveys in a shopping mall by one of the researchers. The sample consisted of 55 per cent males, 80 per cent were between 21 and 40 years old, and respondents were screened to be working adults. Fifty per cent of the sample had completed a college degree or higher.

Manipulations

A scenario was developed describing a highly satisfying service experience as a high level of satisfaction is generally seen as a necessary but not sufficient condition for recommendation behaviors to take place (Wirtz *et al.*, 2013). The scenario read as follows. "Imagine that you subscribe to a mobile phone service provided by Telemobile. Telemobile provides excellent customer service, its network coverage is excellent and it charges competitive prices. Overall, Telemobile's services are deemed to be better than its main competitors. You are extremely pleased to be a Telemobile customer".

Incentive size was operationalized in the form of a percentage discount on the next month's phone bill. As respondents can have different points of reference with regard to a reasonable incentive size, we used a relative rather than an absolute amount to manipulate the incentive size, which is consistent with the principle of relativity (Heath *et al.*, 2000). Specifically, incentive size was manipulated at three levels as follows:

> Recently, Telemobile has launched a new recommend-a-friend-program. It offers a 3 per cent/15 per cent/30 per cent discount off your next month's mobile phone bill if you recommend a friend or family member to subscribe to Telemobile and that friend subscribes to the service.

In the scenario, the incentives would only be paid if the recommendation was successful and the other person subscribed to Telemobile. This is consistent with the design of many existing RRPs in the marketplace.

Pretest
The scenarios were pretested for realism and believability on a sample of 43 respondents randomly assigned to the three incentive size conditions (3, 15 and 30 per cent discount). Mean realism for all experimental cells ranged from 5.33 to 5.76 on a three-item, seven-point scale (i.e. "The scenario is realistic", "It is easy to imagine being in the situation described", "Something like the situation can happen") significantly above the scale midpoint ($t = 9.13$, $p < 0.001$).

The manipulation of incentive size was checked asking respondents their level of agreement with two items (i.e. "The incentive is large" and "The incentive is generous") on a seven-point scale. The respective means were 3.80, 4.70 and 5.33 for the 3, 15 and 30 per cent discount conditions, significantly different from one another ($F = 4.47$, $p < 0.05$).

Measures
All measures consisted of multi-item seven-point Likert-type scales ranging from 1 (strongly disagree) to 7 (strongly agree)

and are shown in Table I. Likelihood to recommend was measured on a three-item scale drawn from Wirtz *et al.* (2013). The three-item measure of favorability of metaperception was taken from the scale previously used by Wirtz *et al.* (2013), and the three-item scale for perceived attractiveness was adapted from Burton and Lichtenstein (1988).

Experimental procedure
Respondents were randomly allocated to the experimental conditions. Each was presented with a cell phone scenario containing the incentive manipulations. They were instructed to read the scenario carefully and imagine themselves in that situation. After reading the scenario, respondents answered four questions assessing the likelihood of them making a recommendation and three questions about the favorability of metaperception of the recommendation.

Results
The analysis was conducted using the partial least squares approach (PLS) to structural equation modeling (SEM) (Chin, 2010; Ringle *et al.*, 2005) to assess the correlations, average variances extracted and shared variances of the constructs and to assess the estimates for the parameters of the structural models. Table II reports the means, correlations, average variances extracted and shared variances of the constructs involved in the three studies. Study 1 results show that convergent validity was satisfactory; the average variance extracted for each construct exceeding 0.50. The convergent validity guidelines were also met at the item level (Chin, 2010); the block of items has a high loading and a narrow range for metaperception (0.93 to 0.96), perceived attractiveness (0.93 to 0.95) and likelihood to recommend (0.94 to 0.96). Discriminant validity guidelines were also met whereby the average variance extracted for each construct exceeded the squared correlation (i.e. shared variance)

Table I Scale items for construct measures

Model constructs	Cronbach's alpha *Composite reliability*		
	Study 1	**Study 2**	**Study 3**
Likelihood of recommendation	0.93/*0.96*	0.93/*0.95*	0.96/*0.97*
I am likely to recommend the (service) to him/her			
I am likely to encourage him/her to patronize the (service)			
I am likely to put in effort to recommend the (service) to him/her			
Perceived attractiveness	0.94/*0.96*	0.96/*0.97*	0.97/*0.98*
The incentive is appealing to me			
The incentive is attractive			
The incentive is valuable to me			
Favorability of metaperception	0.94/*0.95*	0.93/*0.96*	0.92/*0.96*
He/she will think that my recommendation is believable			
He/she will think that my recommendation is sincere			
He/she will think that my recommendation is trustworthy			
Tie-strength			0.96/*0.95*
He/she is someone whom I would be willing to share personal confidences with			
He/she is someone whom I would gladly spend a free afternoon socializing with			
He/she is someone whom I would be likely to perform a large favor for			

Notes: Constructs were measured using seven-point Likert-type scales anchored in 1 = strongly disagree and 7 = strongly agree. Satisfaction was measured through a seven-point semantic differential scale

Table II Means, standard deviations, correlations, average variances extracted, and shared variances studies 1, 2 and 3

Variable	Study 1 (n = 88) M	SD	1[a]	2	3	4	Study 2 (n = 113) M	SD	1	2	3	4	5	Study 3 (n = 152) M	SD	1	2	3	4	6
Incentive size	n.a.	n.a.	–	0.18[d]	0.05	0.06	n.a.	n.a.	–	0.24	0.04	0.05	0.00	n.a.	n.a.	–	0.56	0.07	0.16	0.01
Perceived attr.	3.56	1.43	42[c]**	(0.89)[b]	0.01	0.32	3.55	1.54	0.49**	(0.93)	0.01	0.35	0.27	4.32	1.67	0.75**	(0.95)	0.00	0.50	0.03
Metaperception	3.96	1.33	-0.21*	0.07	(0.90)	0.11	4.34	1.31	-0.19*	-0.01	(0.89)	0.07	0.02	4.89	1.27	-0.27**	-0.06	(0.91)	0.13	0.28
Recommend	4.09	1.22	0.26*	0.56**	0.37**	(0.89)	3.90	1.20	0.21*	0.59**	0.27*	(0.88)	0.06	4.48	1.44	0.40**	0.70**	0.36**	(0.93)	0.12
Incentive utility							n.a.	n.a.	-0.04	0.51**	-0.15	0.24**	–							
Tie-strength														n.a.	n.a.	-0.07	-0.08	0.51**	0.27**	–

Notes: [a]Numbers correspond to the constructs indicated in the first column; [b]The average variance extracted (AVE) are shown on the diagonal between brackets; [c]Correlations among constructs are reported in the lower half of the matrix; [d]Squared correlations among constructs are reported in the upper half of the matrix; *$p < 0.05$; **$p < 0.01$

with any other construct. Furthermore, the item of each construct loaded more highly to its intended construct than to any other construct, supporting discriminant validity at the item level (Chin, 2010).

H1 was estimated through a multiple mediator model following Hayes (2013; Model 4). First, the analysis estimated the direct path from incentive size to likelihood to recommend without including the mediator variables and found a positive direct effect ($\beta = 0.26$, $t = 3.10$, $p < 0.05$). Then, perceived attractiveness and favorability of metaperception were introduced in the model to estimate their direct and mediating effects. When both constructs were included in the model, the direct path from incentive size to likelihood to recommend became non-significant ($\beta = 0.10$, $t = 1.21$, $p = 0.23$), suggesting that the effects of incentive size on likelihood to recommend is fully explained by the two mediating variables of attractiveness of incentive and metaperception.

Table III and Figure 1 summarize the estimation results of the final Model 1 which shows that incentive size has a positive effect on perceived attractiveness ($\beta = 0.43$, $t = 4.98$, $p < 0.01$) and a negative effect on favorability of metaperception ($\beta = -0.23$, $t = 2.24$, $p < 0.05$). In other words, a higher incentive increases the attractiveness of the incentive, but, at the same time, decreases favorability of metaperception. Perceived attractiveness and favorability of metaperception both have a positive effect on likelihood to recommend ($\beta = 0.49$, $t = 5.71$, $p < 0.05$ and $\beta = 0.31$, $t = 2.63$, $p < 0.05$, respectively).

The significance of the specific indirect effect of perceived attractiveness and of favorability of metaperception was estimated through a bootstrapping procedure with 5,000 samples (Hayes, 2013) using a one-tailed *t*-test for the unidirectional hypotheses. The bootstrapped 95 per cent CI around the indirect effect does not contain zero for both perceived attractiveness [0.29, 0.13] and favorability of metaperception [−0.002, −0.141]. The total indirect effect does not include zero [0.26, 0.02], confirming that collectively both variables fully mediate the effect of incentives on likelihood to recommend, providing support for *H1*.

In sum, the findings suggest that incentives operate on likelihood to recommend through two opposing mechanisms, a positive effect via the perceived attractiveness of the incentive, and a negative effect via favorability of metaperception of the recommender. A further insight of this study is that, when the two mediators are introduced in the model, the direct effect of incentive size on likelihood to recommend is no longer significant, which suggests that this model captures the key psychological processes that together drive the effectiveness of incentive size on recommendation intentions.

Study 2: adding perceived usefulness as moderator

Method

Study 2 used again a mobile service as research context. Participants were randomly assigned to a 2 (incentive size: free 10 minutes, free 200 minutes of international calls on the mobile) × 2 (incentive usefulness: useful, not useful to the respondent) between-subject design. The scenarios were pretested on a sample of 27 respondents randomly allocated to the two experimental conditions with the same manipulation

check measures as used in Study 1. Mean realism for all experimental cells ranged from 4.48 to 5.35, significantly above the scale midpoint ($t = 5.44$, $p < 0.01$). The manipulation of incentive size was checked for the two incentive levels on the same scale as used in Study 1. The means were 3.85 and 5.11 for the free 10 minutes and free 200 minutes international call conditions, respectively ($F = 6.09$, $p < 0.05$).

Respondents

To obtain a wide spectrum of the working population, we distributed 113 questionnaires to a convenience sample of customers in people's homes and offices in Singapore by one of the researchers. The sample consisted of 52 per cent males, and 87 per cent were between 21 and 40 years old. Fifty-two per cent of the sample had completed a college degree or higher.

Manipulations, experimental procedure, and measures

The scenario was adopted from Study 1 but with operationalizing incentive size in the form of a number of free minutes of international calls on a cell phone. This type of incentive is popular by mobile operators, and it is particularly appreciated in Singapore as 42 per cent of its population originated from other countries and therefore tends to have many relatives and friends living abroad. The two incentive conditions read as follows: "Recently, Telemobile has launched a new recommend-a-friend-program. It will offer free 10 (200) minutes roaming for international calls if you recommend a friend or family member to subscribe to Telemobile and that person subscribes to the service".

Incentive usefulness was manipulated at two levels. In the useful condition, the scenario read: "Your parents live overseas and therefore you really could use the free roaming minutes as you call them frequently." In the non-useful condition, the scenario read: "You have so far not made any international calls from your mobile phone, and probably wouldn't use the free roaming minutes if you received them". The same measures as in Study 1 were also used in Study 2 (Table I).

Results and discussion

The means, correlations, average variances extracted, and shared variances of the construct involved in Study 3 were satisfactory Table II). Convergent validity was satisfactory (AVE > 0.50) at a construct and item level; the block of items has a high loading and a narrow range for metaperception (0.92 to 0.95), perceived attractiveness (0.96 to 0.97) and likelihood to recommend (0.91 to 0.94) (Chin, 2010). For all constructs, the AVE exceeded the squared correlation with any other construct, showing discriminant validity. Moreover, the items of each construct loaded more highly to its intended construct than to any other construct, supporting discriminant validity at the item level (Chin, 2010).

The results of the PLS model show that the direct path from incentives to likelihood to recommend without including the mediator variables is positive ($\beta = 0.21$, $t = 2.35$, $p < 0.01$). When perceived attractiveness and metaperception are included in the model, the direct path from incentives to likelihood to recommend becomes non-significant ($\beta = -0.03$, $t = 0.30$, $p = 0.71$).

The final Model 2 is shown in Table III. Incentives have a positive effect on perceived attractiveness ($\beta = 0.49$, $t = 8.20$, $p < 0.01$) and a negative effect on favorability of

Table III Path coefficients for studies 1, 2 and 3

Structural path	Study 1			Study 2			Study 2; Moderation Perceived Usefulness			Study 3			Study 3; Moderation Tie-strength		
	Estimate	t-value	R^2	Estimate	t-value	R^2	Estimate	t-value	R^2	Estimate	t-value	R^2	Estimate	t-value	R^2
Incentive size → recommend	0.10	1.21		−0.03	−0.30		−0.03	−0.30		−0.09	1.13		−0.09	1.12	
Incentive size → perceived attractiveness	0.43	4.98**	0.18	0.49	8.20**	0.18	0.51	9.47**	0.57	0.75	22.68**	0.56	0.75	22.27**	0.56
Perceived attractiveness → recommend	0.49	5.71**		0.63	8.00**		0.62	7.78**		0.79	10.12**		0.79	9.70**	
Incentive size → metaperception	−0.23	2.25**	0.05	−0.20	2.58*	0.05	−0.20	2.21**	0.04	−0.27	3.24**	0.07	−0.35	5.37**	0.40
Metaperception → recommend	0.31	2.63**		0.33	3.92**		0.33	3.63**		0.39	6.97**		0.39	6.93**	
Incentive size × Perceived usefulness → perceived attractiveness							0.21	3.57**	—						
Incentive size × Tie-strength → metaperception													0.13	1.99*	

Notes: *p < 0.05 (two-tailed); **p < 0.01 (two-tailed)

metaperception ($\beta = -0.20$, $t = 2.58$, $p < 0.01$), replicating the findings from Study1. In other words, an increasing incentive size increases the perceived appeal of the incentive, but decreases the favorability of the metaperception of the recommender. Perceived attractiveness and metaperception both have a positive effect on likelihood to recommend ($\beta = 0.63$, $t = 8.00$, $p < 0.01$ and $\beta = 0.33$, $t = 3.92$, $p < 0.01$, respectively).

As in Study 1, bootstrapping (5,000 samples) assessed the significance of the indirect effects, that is estimated the specific indirect effect for perceived attractiveness and for favorability of metaperception, and the total indirect effect (Hayes, 2013, Model 4). The one-tailed test with a bootstrapped 95 per cent CI around the indirect effect did not contain zero for both perceived attractiveness (0.42, 0.19) and metaperception (-0.001, -0.13, $p < 0.005$). The total indirect effect is different from zero (0.38, 0.11), providing additional support for (*H1*) that perceived attractiveness and favorability of metaperception collectively mediate the effect of incentives on likelihood to recommend.

To test the moderating effect of incentive usefulness on the relationship between incentive size and perceived attractiveness (*H2*), the product indicator approach was applied (Chin *et al.*, 2003). This requires first computing the indicators of the interaction as the product between incentive size and perceived usefulness (mean centered), and then including the direct effect of perceived usefulness on perceived attractiveness to avoid the overestimation of the moderating effect. Second, the index of moderated mediation (Hayes, 2015; Model 7) was computed to quantify the relationship between the moderator and the indirect effect. The 95 per cent bootstrapped confidence interval for the index of moderated mediation is different from zero (0.02, 0.64), indicating that the indirect effect of incentive size on likelihood to recommend through perceived attractiveness is positively moderated by incentive usefulness.

Model 2 in Figure 1 and Table III shows the parameter estimates of the model when perceived usefulness is included. First, the inclusion of the moderator in the model does not affect the size of the other paths suggesting a robust model. The interaction term of perceived usefulness and incentive size has a positive and significant effect on perceived attractiveness ($\beta = 0.21$, $t = 3.55$, $p < 0.01$), meaning that perceived usefulness strengthens the positive relationship between incentive size and perceived attractiveness. That is, when the perceived usefulness of the incentive is high, the path between incentive size and perceived attractiveness becomes stronger ($\beta = 0.72$, i.e. $0.51 + 0.21$) than if the perceived usefulness is low ($\beta = 0.30$, i.e. $0.51 - 0.21$). Thus, the positive effect of incentive size on perceived attractiveness is more pronounced when the incentive is deemed useful rather than not useful. This finding provides support for (*H2*).

Test of alternative causal paths is desirable when analyzing mediational structures (Iacobucci, Saldanha, and Deng, 2007). To verify whether perceived usefulness moderates independently and exclusively, the incentive size-perceived attractiveness relationship, a check on whether the moderator affects the effect of incentives on likelihood to recommend via favorability of metaperception was conducted. The findings show that incentive usefulness does not moderate the incentive

size–metaperception relationship ($\beta = -0.15$, $p = 0.10$), thereby ruling out alternative mediational structures.

Study 3: adding tie-strength as moderator

Method

Banking was selected as the research context for Study 3. RRPs are common in banking (examples include Citibank, HSBC and Capital One) because of the intangible nature of the service and the high set up and learning costs for potential customers. Consequently, these firms have come to offer large amounts of incentives to recommenders. The experiment used a 3 (incentive size: $10; $50; and $250 credit) × 2 (tie-strength: weak; strong) between-subject factorial design. The scenarios were pretested for realism and believability on a sample of 35 respondents using the same scales as in the previous experiments. Mean realism for all experimental cells ranged from 5.26 to 5.37 on a three-item seven-point Likert scale, significantly above the scale midpoint (t = 4.23, $p < 0.001$). The means for the incentive size manipulation were 3.23, 4.66 and 4.95 for the $10, $50 and $250 credit discount conditions, respectively, significantly different from one another ($F = 4.94$, $p < 0.05$).

Respondents

Respondents were randomly assigned to the experimental conditions. A total of 152 questionnaires were collected from a convenience sample of customers in people's homes and offices in Singapore by one of the researchers. The sample consisted of 55 per cent females and 86 per cent were between 21 and 40 years old. Sixty-four per cent of the sample had completed a college or a postgraduate degree.

Manipulations and experimental procedure

The scenario described a highly satisfying service experience that read as follows:

> Imagine you are a client of GlobalBank where you have your main savings account. GlobalBank provides excellent customer service, has comprehensive financial plans and pays competitive interest rates. Overall, GlobalBank's services are deemed better than its main competitors. You are extremely pleased with GlobalBank.

Incentive size was operationalized in the form of a cash incentive, which is commonly used by many banks. For the three incentivized conditions, the respondent read as follows:

> Recently, GlobalBank has sent you an email regarding the launch of their new Recommend-a-Friend Program. It offers a $10 ($50, $250) incentive that will be credited to your savings account when you recommend someone to open a new account with GlobalBank. All you have to do is to forward this email and should anyone of your contacts respond and open an account, you will be credited the incentive.

The tie-strength manipulation followed past research (Frenzen and Nakamoto, 1993; Wirtz *et al.*, 2013) and read in the weak tie condition:

> One day, you meet Chris who is one of your colleagues from another department in the company you work. You don't really know Chris well but you happen to chat with him today when you met him waiting at the reception counter.

In the strong tie condition, the scenario read: "One day, you are having dinner with Chris, your very close family member". The measures from Study 1 were also used in Study 3 (Table I).

Results and discussion

First, tie-strength manipulation was examined with a three-item, seven-point Likert-type scale adapted from Frenzen and Nakamoto (1993), and results showed that the manipulation was successful (M_{weak} = 3.51; M_{strong} = 5.35; F = 122.85; $p <$ 0.01).

Convergent validity was satisfactory both at a construct (AVE > 0.50) and at an item level: the block of items has a high loading and a narrow range for metaperception (0.95 to 0.96), perceived attractiveness (0.97 to 0.98) and likelihood to recommend (0.96 to 0.98) (Chin, 2010). Discriminant validity was also satisfactory; the average variance extracted exceeded the squared correlation with any other construct, and the item of each construct loaded more highly to its intended construct than to any other construct (Chin, 2010).

First, the analysis estimated the direct path from incentives to likelihood to recommend without including the mediator variables and found a positive direct effect (β = 0.40, t = 6.21, $p <$ 0.01). Then, it introduced perceived attractiveness and favorability of metaperception in the model to estimate their direct and mediating effects. When both constructs were included in the model, the direct path from incentives to likelihood to recommend became non-significant (β = −0.09, t = 1.13, p = 0.26), replicating the findings from Studies 1 and 2. Model 3a in Table III shows that incentives have a positive effect on perceived attractiveness (β = 0.75, t = 22.68, $p <$ 0.01) and a negative effect on favorability of metaperception (β = −0.27, t = 3.24, $p <$ 0.05). Again, larger incentives increase the perceived appeal of the incentive but decrease the favorability of metaperception. Perceived attractiveness and favorability of metaperception both have a positive effect on likelihood to recommend (β = 0.79, t = 10.12, $p <$ 0.01 and β = 0.39, t = 6.97, $p <$ 0.01, respectively). These findings replicate the base model and provide further support for *H1*.

Bootstrapping (5,000 samples) assessed the significance of the indirect effects, that is estimated the specific indirect effect for perceived attractiveness and for metaperception and the total indirect effect (Hayes, 2013). The bootstrapped one-tailed 95 per cent confidence interval around the indirect effect did not contain zero for both perceived attractiveness [0.71, 0.48] and metaperception [−0.04, −0.17]. The total indirect effect is also different from zero [0.63, 0.35], suggesting again that perceived attractiveness and favorability of metaperception collectively fully mediate the effects of incentives on likelihood to recommend.

H3 proposed a moderating effect of tie-strength on the relationship between incentive size and favorability of metaperception, so that the negative relationship should be mitigated if the strength of the tie between the recommender and the receiver is strong. The same approach as in Study 2 was used to estimate the moderation effect. The results show that the 95 per cent bootstrap confidence interval is different from zero [−0.003, −0.282], indicating that the indirect effect of incentive size on likelihood to recommend through favorability of metaperception is moderated by tie-strength.

Model 3 in Figure 1 and Table III shows the parameter estimates of the model when tie-strength is included. When the moderator is included in the model, the size of the other paths remains unchanged, but the interaction term of tie-strength and incentive size has a positive and significant effect on favorability of metaperception (β = 0.13, t = 1.99, p = 0.05). The positive sign of the moderating effect indicates that as the tie becomes stronger, the path between incentive size and metaperception becomes less negative (β = −0.22, i.e. −0.35 +0.13) than if the relationship were weak (β = −0.48, i.e. −0.35 −0.13; Hair *et al.*, 2014). Thus, the negative effects of incentive size on favorability of metaperception favorability are more pronounced for weak than for strong ties, providing support for *H3*.

Next, a test on whether the moderating effect of tie-strength operates exclusively on the relationship between incentive size and favorability of metaperception followed. The findings show that the moderating effect of tie-strength on the effect of incentive size on attractiveness is not significant (β = 0.04, p = 0.76). This finding, together with the findings in Study 2 regarding the non-significance of the moderation of incentive usefulness on the incentive size and metaperception path, suggests that the two opposing effects operate independently as they each have a unique moderator.

General discussion

Despite the widespread use of RRPs, there is still only a partial understanding of the recommender's psychological processes that determine their willingness to make incentivized recommendations. This study is the first to examine and confirm two dual and opposing forces that explain customers' intentions to recommend and help to reconcile inconsistent findings of past studies regarding the effectiveness of incentives and their size.

Summary findings and their implications for theory

The three studies offer important insights into recommenders' psychological processes when presented with an incentive for making a recommendation. First, the findings indicate that, as the face value of the incentive increases, recommenders' perceived attractiveness of the incentive also increases. However, recommenders' favorability of how they think they are viewed by others (i.e. their favorability of metaperception) decreases. These effects are consistent across all three studies, different types of incentives (i.e. discounts, free service, and cash) and service contexts (i.e. mobile phone and banking services), suggesting robust findings.

Interestingly, perceived attractiveness and favorability of metaperception collectively fully mediate the relationship between incentive size and intention to recommend in all three studies. When these two constructs are included into the model, the direct relationship between incentive size and likelihood to recommend becomes non-significant, suggesting that our studies highlight two important mechanisms that shape and fully explain recommenders' behavioral intentions. That is, the relative strengths of these two opposing mediating effects fully determine the net effect of an incentive on the likelihood to make a recommendation.

Second, previous empirical studies have demonstrated the mediating effect of favorability of metaperception on recommendation likelihood (Wirtz *et al.*, 2013). The vital role of replication research and re-inquiries to generalize earlier research findings has been emphasized by a number of marketing scholars (Easley *et al.*, 2000; Evanschitzky *et al.*, 2007). Our study

examines and extends previous research because no prior work has tested metaperception as a mediator in conjunction with other opposite attitudinal mediators. That is, this research combines two streams of research into a single multiple mediation model. As Preacher and Hayes (2008) outline, the benefits of a multiple mediation model include the ability to examine a set of potential mediators and to test competing theories. Our findings consistently support the effects of these opposing forces, and, rather than advocating the prevalence of one theory over the other, they underline the coexistence of different psychological processes that collectively, not alternatively, explain how consumer respond when offered an incentive to make a recommendation.

Third, the findings indicate that a customer's assessment of the incentive usefulness shapes the relationship between the incentive size and its attractiveness. This finding introduces an under-researched issue in the context of RRPs, namely, the degree to which an incentive serves the customers' purposes. An incentive that might seem attractive at a first glance can lose or gain its attractiveness as a virtue of the customer's subjective belief that the particular incentive will yield positive benefits in his life. Thus, the usefulness of an incentive represents an additional extrinsic motivator that adds to (or subtracts from) the incentive size to ultimately affect the likelihood to make a recommendation.

Fourth, the results show that tie strength moderates the incentive size–metaperception link. This result confirms previous findings (Wirtz *et al.*, 2013; Xiao *et al.*, 2011), and further supports that recommenders' worry of being seen insincere and untrusted by the receivers is exacerbated if the recommendation is directed at a weak tie. Probably weak ties, more so than strong ties, are seen as more easily influenced by a recommender's specific action such as an incentivized recommendation. This finding represents a replication of past research but adds value in this context to show that tie-strength is an exclusive moderator of the incentive–metaperception relationship.

Finally, usefulness moderates the incentive size–attractiveness of incentive relationship but has no influence on the incentive size–metaperception link. Likewise, tie-strength moderates the incentive size–metaperception relationship but has no effect on the incentive size–attractiveness link. That is, the moderating effects of usefulness and tie-strength operate uniquely on their respective hypothesized relationships and not vice versa. This finding offers additional evidence that the two mediating processes operate independent of each other and are influenced by different moderators.

Managerial implications

There are several managerial implications that these findings suggest. First, managers should carefully calibrate the size of RRP incentives offered. Although the design of RRPs needs to consider the size (i.e. face value) of the incentive in relation with cost and revenues projections, managers should also consider the psychological consequences of incentive size on recommenders. More precisely, managers should keep in mind that large incentives are attractive for recommenders, but, at the same time, they reduce the likelihood of recommendation because of metaperception concerns. Thus, calibrating the

right size of the incentive is crucial for the successful implementation of RRPs.

Second, managers need to shift their attention from the size of incentives to their perceived attractiveness. Managers should become cognizant of the interplay between the face value, usefulness and the resultant perceived attractiveness on incentives to avoid unintended negative consequences. For example, increasing the face value of an incentive (as is common in many programs as they want to communicate a high value) that is seen as not very useful and attractive (which is also often the case as incentives look great at a first glance, but frequently their attractiveness is reduced by terms and conditions that, upon closer inspection, make the incentive difficult or inconvenient to use; e.g. "this dining voucher is only valid on weekdays") is likely to produce weak results. That is, an incentive with a high face value but low usefulness will reap the worst of both mediation effects as perceived attractiveness is low but the negative effect on favorability of metaperception is high. Thus, companies are advised to design incentives that are moderate in size but perceived as highly attractive. Such a combination would allow to maximize the positive effects of incentives via their perceived attractiveness and to minimize their negative effects via metaperception.

Finally, when incentives with high face value are to be used (e.g. as is often the case in private banking and high-value contractual services), they should be targeted at strong rather than weak ties because of the lower negative effects of incentives on metaperception. For example, private banks could target RRPs exclusively at their clients' extended families.

Limitations and further research

As with any research, this study has limitations that offer opportunities for further research. First, the manipulations did not include the satisfaction level of the recommended service and focused only on highly satisfactory service experiences. In doing so, this research took the conservative stance that favorability of metaperception matters even when the customer is delighted and worries less about risking recommending a lesser service, and it showed that even in this situation metaperception concerns are present. Although it could be expected that the effects of metaperception concerns increase with declining customer satisfaction, future research should explicitly test the models with varying levels of customer satisfaction.

Second, the manipulation of the degree of tie-strength did not consider very weak ties (e.g. in an anonymous online environment in which one acts using pseudonyms). For these ties, it is possible that favorability of metaperception may not matter (much) as people may care little about what recommendation recipients think about them if they do not know them and if there is no bearing on future interactions. Future research should explore whether recommendations in very weak tie-strength contexts are less affected by metaperception concerns, just as for strong ties. Such a finding would suggest an inverse U-shaped relationship of the moderating effect, with the strongest effect of tie-strength in moderate tie relationships.

Third, our study did not investigate how personal background variables might affect the relationships

investigated. For example, the level of a household's income could exacerbate opportunistic or deal-seeking behavior (Wirtz and Chew, 2002) and reduce the relevance of metaperception concerns. These issues await future investigation.

Finally, this research relied on multiple scenario-based experiments to test the hypotheses with intentions to recommend rather than actual behaviors. While the three experiments effectively test for the hypothesized opposing mediational effects, field experiments would be of value to strengthen the external validity of the findings. Nevertheless, our findings are consistent with and complement previous research that explored the individual direct effects of incentives using both qualitative research (Wirtz *et al.*, 2013) and field experiments (Jin and Huang, 2014).

In sum, the findings of this set of studies consistently establish two coexisting and opposing mechanisms that act simultaneously on a customer's likelihood to make a recommendation to fully explain the effects of incentives on referral intentions and provide a potential explanation for contradictory findings in past research. Hopefully, these findings will stimulate further research on the psychological mechanisms that underlie consumer responses to incentivized referrals.

References

Arndt, J. (1967), "Role of product-related conversations in the diffusion of a new product", *Journal of Marketing Research*, Vol. 4 No. 3, pp. 291-295.

Berger, J. (2014), "Word of mouth and interpersonal communication: a review and directions for future research", *Journal of Consumer Psychology*, Vol. 24 No. 4, pp. 586-607.

Beuk, F., Malter, A.J., Spanjol, J. and Cocco, J. (2014), "Financial incentives and salesperson time orientation in new product launch: a longitudinal study", *Journal of Product Innovation Management*, Vol. 31 No. 4, pp. 647-663.

Brown, J.J. and Reingen, P.H. (1987), "Social ties and word-of-mouth referral behavior", *Journal of Consumer Research*, Vol. 14 No. 3, pp. 350-362.

Burton, S. and Lichtenstein, D.R. (1988), "The effect of ad claims and ad context on attitude toward the advertisement", *Journal of Advertising*, Vol. 17 No. 1, pp. 3-11.

Chin, W.W. (2010), "How to write up and report PLS analyses", *Handbook of Partial Least Squares*, Springer Berlin Heidelberg, pp. 655-690.

Chin, W.W., Marcolin, B.L. and Newsted, P.R. (2003), "A partial least squares latent variable modeling approach for measuring interaction effects: results from a monte Carlo simulation study and an electronic-mail emotion/adoption study", *Information Systems Research*, Vol. 14 No. 2, pp. 189-217.

Churchill, G.A., Ford, N.M. and Walker, O.C. (1979), "Personal characteristics of salespeople and the attractiveness of alternative rewards", *Journal of Business Research*, Vol. 7 No. 1, pp. 25-50.

Cook, T.S.D. and Campbell, D.T. (1979), *Quasi-Experimentation: Design and Analysis Issues for Field Settings*, Rand McNally, Chicago, IL.

Davis, F.D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, Vol. 13 No. 3, pp. 319-340.

De Gieter, S. and Hofmans, J. (2015), "How reward satisfaction affects employees' turnover intentions and performance: an individual differences approach: rewards and employee outcomes", *Human Resource Management Journal*, Vol. 25 No. 2, pp. 200-216.

Easley, R.W., Madden, C.S. and Dunn, M.G. (2000), "Conducting marketing science: the role of replication in the research process", *Journal of Business Research*, Vol. 48 No. 1, pp. 83-92.

Evanschitzky, H., Baumgarth, C., Hubbard, R. and Armstrong, J.S. (2007), "Replication research's disturbing trend", *Journal of Business Research*, Vol. 60 No. 4, pp. 411-415.

Frenzen, J.K. and Nakamoto, K. (1993), "Structure, cooperation, and the flow of market information", *Journal of Consumer Research*, Vol. 20 No. 3, pp. 360-375.

Glynn Mangold, W., Miller, F. and Brockway, G.R. (1999), "Word-of-mouth communication in the service marketplace", *Journal of Services Marketing*, Vol. 13 No. 1, pp. 73-89.

Goffman, E. (1959), *The Presentation of Self in Everyday Life*, Doubleday, New York, NY.

Hair, J.F., Hult, G., Ringle, C. and Sarstedt, M. (2014), *A Primer on Partial Least Squares Structural Modelling (PLS-SEM)*, Sage, Thousand Oaks, CA.

Hayes, A.F. (2013), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*, Guilford Press.

Hayes, A.F. (2015), "An index and test of linear moderated mediation", *Multivariate Behavioral Research*, Vol. 50 No. 1, pp. 1-22.

Heath, T.B., Ryu, G., Chatterjee, S., McCarthy, M.S., Mothersbaugh, D.L., Milberg, S. and Gaeth, G.J. (2000), "Asymmetric competition in choice and the leveraging of competitive disadvantages", *Journal of Consumer Research*, Vol. 27 No. 3, pp. 291-308.

Iacobucci, D., Saldanha, N. and Deng, X. (2007), "A meditation on mediation: evidence that structural equations models perform better than regressions", *Journal of Consumer Psychology*, Vol. 17 No. 2, pp. 140-154.

Jin, L. and Huang, Y. (2014), "When giving money does not work: the differential effects of monetary versus in-kind rewards in referral reward programs", *International Journal of Research in Marketing*, Vol. 31 No. 1, pp. 107-116.

Kornish, L.J. and Li, Q. (2010), "Optimal referral bonuses with asymmetric information: firm-offered and interpersonal incentives", *Marketing Science*, Vol. 29 No. 1, pp. 108-121.

Laing, R.D., Phillipson, H. and Russell Lee, A. (1966), *Interpersonal Perception: A Theory and a Method of Research*, Springer, New York, NY.

Mehta, R., Anderson, R.E. and Dubinsky, A.J. (2000), "The perceived importance of sales managers' rewards: a career stage perspective", *Journal of Business & Industrial Marketing*, Vol. 15 No. 7, pp. 507-524.

Norberg, P. (2017), "Employee incentive programs: recipient behaviors in points, cash, and gift card

programs", *Performance Improvement Quarterly*, Vol. 29 No. 4, pp. 375-388.

Preacher, K.J. and Hayes, A.F. (2008), "Mediation and the estimation of indirect effects in communication research", *The Sage Guide to Advanced Data Analysis Methods for Communication Research*, Sagem, Thousand Oaks, CA.

Price, L.L. and Feick, L.F. (1984), "The role of interpersonal sources in external search: an informational perspective", *Advances in Consumer Research*, Vol. 11 No. 1.

Ramaseshan, B., Wirtz, J. and Georgi, D. (2017), "The enhanced loyalty drivers of customers acquired through referral reward programs", *Journal of Service Management*, Vol. 28 No. 4, pp. 687-706.

Ringle, C., Wende, S. and Will, A. (2005), "SmartPLS version 2.0 M2", available at: www.smartpls.de

Ryu, G. and Feick, L. (2007), "A penny for your thoughts: referral reward programs and referral likelihood", *Journal of Marketing*, Vol. 71 No. 1, pp. 84-94.

Schlenker, B.R. (1980), *Impression Management: The Self-Concept, Social Identity, and Interpersonal Relations*, Brooks/Cole, Monterey, CA.

Schlenker, B.R. and Leary, M.R. (1982), "Social anxiety and self-presentation: a conceptualization and model", *Psychological Bulletin*, Vol. 92 No. 3, pp. 641-669.

Schmitt, P., Skiera, B., Van den Bulte, C. (2011), "Referral programs and customer value" *Journal of Marketing*, Vol. 75 No. 1, pp. 46-59.

Segars, A.H. and Grover, V. (1993), "Re-examining perceived ease of use and usefulness: a confirmatory factor analysis", *MIS Quarterly*, Vol. 17 No. 4, pp. 517-525.

Sela, A. and Berger, J. (2012), "How attribute quantity influences option choice", *Journal of Marketing Research*, Vol. 49 No. 6, pp. 942-953.

Sivadas, E. and Jindal, R.P. (2017), "Alternative measures of satisfaction and word of mouth", *Journal of Services Marketing*, Vol. 31 No. 2, pp. 119-130.

Tuk, M.A., Verlegh, P.W., Smidts, A. and Wigboldus, D.H. (2009), "Sales and sincerity: the role of relational framing in word-of-mouth marketing", *Journal of Consumer Psychology*, Vol. 19 No. 1, pp. 38-47.

Wirtz, J. and Chew, P. (2002), "The effects of incentives, deal proneness, satisfaction and tie strength on word-of-mouth behavior", *International Journal of Service Industry Management*, Vol. 13 No. 2, pp. 141-162.

Wirtz, J. and Lovelock, C. (2017), *Services Marketing: People, Technology, Strategy*, 8th ed., World Scientific, NJ.

Wirtz, J. and Zeithaml, V. (2017), "Cost-effective service excellence", *Journal of the Academy of Marketing Science*, p. 122, Published Online first, doi: 10.1007/s11747-017-0560-7.

Wirtz, J., Orsingher, C., Chew, P. and Tambyah, S.K. (2013), "The role of metaperception on the effectiveness of referral reward programs", *Journal of Service Research*, Vol. 16 No. 1, pp. 82-98.

Xiao, P., Tang, T. and Wirtz, J. (2011), "Optimizing referral reward programs under impression management considerations", *European Journal of Operational Research*, Vol. 215 No. 3, pp. 730-739.

Further reading

Godes, D. and Mayzlin, D. (2004), "Using online conversations to study word-of-mouth communication", *Marketing Science*, Vol. 23 No. 4 (Fall), pp. 545-560.

Hastings, B., Kiely, J. and Watkins, T. (1988), "Sales force motivation using travel incentives: some empirical evidence", *Journal of Personal Selling & Sales Management*, Vol. 8 No. 2, pp. 43-51.

Irwin, J.R. and McClelland, G.H. (2003), "Negative consequences of dichotomizing continuous predictor variables", *Journal of Marketing Research*, Vol. 40 No. 3, pp. 366-371.

Schlenker, B.R. and Pontari, B.A. (2000), "The Strategic Control of Information: impression Management and Self-Presentation in Daily Life", in Abraham, T., Richard, B.F. and Jerry M.S. (Eds), *Psychological Perspectives on Self and Identity*, American Psychological Association, Washington DC, pp. 199-232.

Singh, J. (1988), "Consumer complaint intentions and behaviors: definitional and taxonomical issues", *Journal of Marketing*, Vol. 52 No. 1, pp. 93-107.

Verlegh, P.W., Ryu, G., Tuk, M.A. and Feick, L. (2013), "Receiver responses to rewarded referrals: the motive inferences framework", *Journal of the Academy of Marketing Science*, Vol. 41 No. 6, pp. 669-682.

Zhao, X., Lynch, J.G. and Chen, Q. (2010), "Reconsidering baron and Kenny: myths and truths about mediation analysis", *Journal of Consumer Research*, Vol. 37 No. 2, pp. 197-206.

Corresponding author

Chiara Orsingher can be contacted at: chiara.orsingher@unibo.it