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# Offering prosocial incentives on-top: Do they sweeten the deal or poison the well?

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## Abstract

Companies often rely on customer feedback to build and improve their business. Customers, in turn, are expected to (i) fill in customer feedback surveys (participation) and (ii) provide accurate responses (performance). To encourage active participation and ensure accurate responses, companies traditionally offer either self-benefiting incentives, like lottery prizes, or prosocial incentives, like charity donations. More recently, some companies have started offering prosocial incentives on top of self-benefiting incentives in the hope to “sweeten the deal,” that is, to improve participation and performance even further. With this research, we challenge whether the on-top prosocial incentives are effective. The evidence from two field experiments and one incentive-aligned online experiment does not confirm any such advantage. In contrast, performance can decrease when a low-amount on-top prosocial incentive is offered relative to a pure self-benefiting setting. This trend is only reversed once the on-top incentive amount increases. Furthermore, for participation, we find that on-top prosocial incentives are ineffective and, at higher amounts, even detrimental. Therefore, our empirical insights rather suggest that on-top prosocial incentives “poison the well.”

## KEYWORDS

affective value, lottery, performance, prosocial incentives

## 1 | INTRODUCTION

Companies increasingly rely on customer feedback to build and improve their business. Feedback allows companies to understand customer satisfaction (Griffin & Hauser, 1993), ensure that complaints are directly voiced with the company and not through channels outside of its control (Richins, 1983), and identify customer pain points to develop innovations (Brown, 2008). There is even literature which documents that by voicing feedback, a customer's purchase frequency and spend with the company increases, also known as the mere measurement effect (Borle et al., 2007; Morwitz et al., 1993).

Given these advantages, the question arises how best to incentivize customers to participate in feedback surveys (participation) and provide accurate responses (performance). In this regard, extant literature (e.g., Biner & Barton, 1990; Furse & Stewart, 1982; Hennig-Thurau et al., 2004; Siuki & Webster, 2021) differentiates two types of commonly used incentives: self-benefiting incentives, which provide a direct benefit to the customer, and prosocial incentives, which promise a benefit for others, for example, in the form of a donation. Research outlines that each incentive type affects performance and participation in a different way. Prosocial incentives can raise performance even at a low amount (Khan et al., 2020), but

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are ineffective at raising participation (e.g., Schwartz et al., 2021). Self-benefiting incentives can decrease performance when the incentive amount is low (e.g., Gneezy & Rustichini, 2000), but are generally suited to raise participation (e.g., Furse & Stewart, 1982).

However, extant literature lacks an understanding of what to expect when combining different incentive types, that is, when a prosocial incentive is offered on top of a self-benefiting incentive. In principle, if utility theory applies (Jensen, 1967), then offering more incentives could “sweeten the deal,” that is, make it more attractive to participate and improve performance. Ideally, both incentive types complement each other, such that adding the prosocial incentive could attenuate the drawbacks of the self-benefiting one. However, the existing literature does not provide guidance regarding the effectiveness of this approach.

Companies seem to anticipate such advantages and increasingly offer an on-top prosocial incentive in addition to a baseline self-benefiting incentive. For example, Procter & Gamble incentivizes customers to participate in surveys by promising a self-benefiting incentive (e.g., entry into a lottery to win a cash prize) and additionally a prosocial incentive (e.g., a donation to the P&G Children's Safe Drinking Water Fund) under the tagline “Earn rewards. Make an impact.” (Procter & Gamble, 2023). Similarly, mobile survey apps like Jagger incentivize respondents to complete surveys in return for self-benefiting incentives (e.g., cash rewards and prize lotteries) and additionally on-top prosocial incentives (e.g., planting a tree for every completed survey) under the tagline “Earn rewards & plant trees” (Jagger, 2023).

The present paper tests whether companies can indeed benefit from the on-top prosocial incentives in two field experiments and one incentive-aligned online experiment. We investigate how the promise of an on-top donation in addition to a self-benefiting lottery incentive affects customers' performance, that is, the provision of *correct* survey responses, and participation, that is, the provision of *complete* survey responses. We then validate our findings in a controlled, broader-designed incentive-aligned online experiment, in which respondents can win a cash reward in return for solving an anagram task (c.f., Goldsmith & Dhar, 2013) within a voluntary post-survey.

While a few extant studies offer insights into the interplay of self-benefiting and prosocial reasons when it comes to people's moral perceptions and donation behaviors (e.g., Feiler et al., 2012; Newman & Cain, 2014), they (i) do not study how they affect customers' responses to company surveys in terms of performance and participation and (ii) leave out the incentive amount as a potential moderator. With the present research, we aim to address these shortcomings. We observe how customers' performance and participation differ when a high, a low, or no on-top prosocial incentive is offered, and compare the observed patterns with those expected to hold when a prosocial incentive is offered in isolation, as described in extant research. This enables us to see whether the self-benefiting baseline incentive alters the effect of prosocial incentives on performance and participation, and if so, for which donation amounts.

Overall, our results suggest that practitioners should be cautious about offering on-top prosocial incentives. Against the idea of “sweetening the deal,” we observe that performance either stays constant or even decreases when a low-amount on-top prosocial incentive is offered relative to the baseline of no on-top incentive. This trend reverses only once an on-top prosocial incentive of a higher amount is offered. Hence, the advantages commonly associated with prosocial incentives—a substantial increase in performance in return for a relatively low incentive amount—do not hold in this setting. Besides, the on-top prosocial incentive is found to be ineffective and, at higher amounts, even detrimental to participation. Therefore, the additional incentive rather seems to “poison the well.” Our paper discusses potential explanations underlying these findings.

## 2 | LITERATURE REVIEW

We first disentangle the different benefits of customer feedback and thereby outline in which ways participation and performance play a major role. Next, we summarize how self-benefiting and prosocial incentives affect performance when offered in isolation, and subsequently we do the same for participation. Finally, we describe what is known about the effects of mixing both incentive types.

### 2.1 | Performance and participation when incentivizing customer feedback

Customer feedback surveys serve as a crucial marketing tool, enabling companies to achieve diverse objectives. The efficacy of these surveys hinges upon ensuring either robust customer participation, exemplary performance, or a blend of both, contingent upon the specific purpose at hand. Subsequently, we will delineate four distinct purposes and describe for each whether high performance, high participation, or both is of primary concern.

First, feedback surveys allow companies to listen to the “voice of the customer” and thereby better *understand customer satisfaction* (Griffin & Hauser, 1993). This understanding can result in benefits like higher customer retention (Markey et al., 2009), higher gross margin and sales growth (Agag et al., 2023) and higher average customer spend (Bone et al., 2017). For this purpose, companies benefit if customers have a high participation rate (independent of their satisfaction) and demonstrate a high performance, that is, truthfully share their level of satisfaction and insights on the reasons.

Second, companies can use feedback surveys to *ensure that customer complaints are directly voiced with them* and not through channels outside of their control. For example, Richins (1983) reports that dissatisfied customers tend to share their experiences through negative word of mouth among family and friends if companies do not encourage raising complaints directly with them. Here, participation in feedback surveys is of primary importance to provide the company with an opportunity to react. If this reaction is fast and the

issue addressed, there is a high chance of transforming a dissatisfied customer into a satisfied one (Hart et al., 1990; Lovelock & Wirtz, 2010). Performance is also important, but more so at the later stage of resolving the complaint.

Thirdly, companies can encourage customers to explain different aspects of their shopping experience, which provides them with useful input to improve this experience (Brown & Katz, 2011; Brown, 2008). In particular processes like *design thinking* require a profound understanding of customer touch and pain points with the firm to develop solution-focused strategies (Celuch & Walz, 2020; Challagalla et al., 2009). Here, performance is most important because companies can only truly understand customer pain points if they are adequately reported.

Finally, extant research shows that by voicing feedback, a customer's purchase frequency and spend with the company increases, also known as the *mere measurement effect* (Borle et al., 2007; Morwitz et al., 1993). Dholakia and Morwitz (2002) show that this effect persists even 1 year after answering a feedback survey. Importantly, a customer's mere *participation* is sufficient for this effect to occur.

In summary, companies need to entice customers to take part in their feedback surveys (participation), provide high-quality answers (performance), or do both. In the subsequent chapters, we use a review of extant research to disentangle how different incentive types affect performance and participation.

## 2.2 | Effect of self-benefiting and prosocial incentives on performance

Hereafter, we discuss the effects of self-benefiting incentives and, subsequently, of prosocial incentives on performance. Table 1 offers a synopsis of the reviewed literature and encapsulates prevailing findings. Most studies are in the area of surveys and incentivizing customer feedback (e.g., Cohen et al., 2019; Furse & Stewart, 1982; Göritz & Neumann, 2016). Besides, other settings relate to tasks requiring altruistic behavior (e.g., Gneezy & Rustichini, 2000; Yin, Li, and Singh, 2020) as well as work-related (e.g., Charness et al., 2016; Chen et al., 2019) and game-based tasks (e.g., Imas & Loewenstein, 2018; Khan et al., 2020). Predominantly, these articles explore self-benefiting and prosocial incentives separately.

### 2.2.1 | Effect of self-benefiting incentives on performance

When it comes to self-benefiting incentives, respondents' performance is scope-sensitive, that is, it changes not only in response to whether a self-benefiting incentive is offered or not but also in response to its amount (Khan et al., 2020): Offering a low amount tends to decrease performance relative to no incentive, but increasing the incentive amount can again heighten performance. This observation has been found consistently across different

settings, including both survey- (Conn et al., 2019; Gritz, 2004; Heerwegh, 2006; Porter & Whitcomb, 2003) and non-survey tasks, such as tasks requiring altruistic behavior (Gneezy & Rustichini, 2000; Gneezy et al., 2011), work-related tasks (Charness et al., 2016), and game-based tasks (Heyman & Ariely, 2004; Imas, 2014; Khan et al., 2020).

In general, performance mirrors the perceived value respondents derive from the incentive. This value consists of an affective and a cognitive component (e.g., Chang & Tuan Pham, 2013; Khan et al., 2020; Loewenstein et al., 2001). While affective value describes "the emotional benefit associated with the incentive," cognitive value describes the "calculative assessment of the tangible benefits to the self" (Khan et al., 2020; p. 45). For self-benefiting incentives, both value components react in response to the incentive amount. When the amount is low, respondents derive a negative affective value because they feel unfairly compensated; at the same time, they derive no notable cognitive value because they do not gain a lot for themselves (Heyman & Ariely, 2004; Khan et al., 2020). As a result, their performance decreases. As the incentive amount increases, respondents no longer derive a negative affective value because they feel the compensation is adequate. At the same time, they derive a higher cognitive value because they gain more for themselves (Khan et al., 2020). As a result, their performance increases again.

### 2.2.2 | Effect of prosocial incentives on performance

When it comes to prosocial incentives, respondents' performance is scope-insensitive, that is, it changes only in response to whether the incentive is offered or not but not in response to its amount (Hsee & Rottenstreich, 2004; Khan et al., 2020; Small et al., 2007): Offering a low prosocial incentive amount tends to substantially increase performance relative to no incentive, but increasing the amount does not result in further heightened performance. This has been found consistently across different settings, including work-related (Charness et al., 2016; Tonin & Vlassopoulos, 2015) and game-based tasks (Imas & Loewenstein, 2018; Imas, 2014; Khan et al., 2020).

Again, respondents' performance mirrors the perceived value they derive from the incentive. Importantly, for prosocial incentives, only affective value reacts to the incentive amount: It substantially increases when a prosocial incentive is introduced, but it does not change when the amount increases (Khan et al., 2020). This effect can be traced back to literature on donation behavior, which suggests that people derive a positive feeling, also known as "warm glow," from the mere act of donating, independent of the amount they donate and what it can achieve for the beneficiaries (e.g., Andreoni, 1989, 1990, 1993; Barasch et al., 2014; Bezençon et al., 2020; Imas, 2014). Meanwhile, cognitive value does not react to prosocial incentives because they do not offer a personal gain for respondents (Khan et al., 2020).

TABLE 1 Literature overview.

Setting	Task	Study	Performance	Participation	Self-benefiting incentives	Prosocial incentives	Mix of incentives	Lab or online experiment	Field experiment	Main finding
Surveys	Survey among researchers	Cohen et al. (2019)		✓		✓		✓		No significant effect of prosocial incentives on participation
	Survey among professionals joining an NPO	Conn et al. (2019)	✓	✓	✓	✓		✓		Higher participation rate for prosocial compared to self-benefiting incentives; no effect on performance (correctness of attention checks)
	Market research panel survey	Göritz and Neumann (2016)		✓		✓		✓		Significantly negative effect of prosocial incentive on participation
	General social survey	Blohm and Koch (2013)		✓	✓			✓		Significantly positive effect of self-benefiting incentive on participation
	Market research panel survey	Göritz and Luthe (2013)		✓	✓			✓		Significantly positive effect of self-benefiting lottery incentives on participation
	Mail survey on religion	Gendall and Healey (2010)		✓		✓			✓	No significant effect of prosocial incentives on participation
	Market research panel surveys	Brüggen and Dholakia (2010)	✓	✓				✓		Respondents' personality traits can explain differences in performance and participation
	Survey among university students	Göritz and Wolff (2007)		✓	✓			✓		Significantly positive effect of self-benefiting lottery incentive on participation
	Survey among students	Heerwegh (2006)		✓	✓			✓		Significantly positive effect of self-benefiting lottery incentive on participation; significantly negative effect of incentive on performance (item nonresponse), yet unsubstantial
	Market research panel survey	Gritz (2004)	✓	✓	✓			✓		Response rate higher for bonus points incentive than money lotteries; performance (number of omitted items) unaffected by incentive type
	Survey among members of a professional association	Bosnjak and Tuten (2003)		✓	✓			✓		Significantly positive effect of self-benefiting lottery incentive on participation

(Continues)

TABLE 1 (Continued)

Setting	Task	Study	Performance	Participation	Self-benefiting incentives	Prosocial incentives	Mix of incentives	Lab or online experiment	Field experiment	Main finding
	Survey among college applicants	Porter and Whitcomb (2003)	✓	✓	✓			✓		No significant effect of self-benefiting lottery incentive on participation; slightly negative effect of self-benefiting incentive on performance (item nonresponse)
	Mail survey on environmental issues	Warriner et al. (1996)		✓	✓	✓			✓	Participation increases with self-benefiting incentive amount; no significant effect of prosocial incentives on participation
	Mail survey among microwave owners	Furse and Stewart (1982)		✓	✓	✓			✓	Participation increases with self-benefiting incentive amount; no significant effect of prosocial incentives on participation
Altruistic behavior	Alumni donations to university; donations to NPO for children	Feiler et al. (2012)		✓	✓	✓	✓		✓	Emphasizing both egoistic and altruistic reasons reduces participation
	Donations to charity	Yin, Li, and Singh (2020)	✓	✓	✓				✓	Monetary incentives increase participation in donor acquisition campaigns, but decrease performance (average donations)
	Blood donations	Lacetera and Macis (2010)		✓	✓				✓	Significantly negative effect of self-benefiting incentive on participation in blood donations
	Donation collection by going from house to house	Gneezy and Rustichini (2000)	✓		✓				✓	Small self-benefiting incentives have a significantly negative effect on performance, but increase performance at higher amounts
	Rating behavior ethically; evaluating an altruistic cause	Newman and Cain (2014)			✓	✓		✓		Tainted-altruism effect: a company's charitable efforts are evaluated worse when they also bear some personal benefits
	Blood donations, volunteer work	Gneezy et al. (2011)	✓		✓			✓		Self-benefiting incentives of a small amount decrease performance relative to no incentive; increasing

TABLE 1 (Continued)

Setting	Task	Study	Performance	Participation	Self-benefiting incentives	Prosocial incentives	Mix of incentives	Lab or online experiment	Field experiment	Main finding
Work	Data entry	Charness et al. (2016)	✓	✓	✓	✓		✓		the incentive amount increases performance
	Entry of bibliographic records	Tonin and Vlassopoulos (2015)	✓	✓	✓	✓		✓		Self-benefiting incentives yield higher performance than prosocial incentives for high amounts; the opposite holds for low amounts
	Publishing articles on an online platform	Chen et al. (2019)	✓	✓	✓			✓		Prosocial incentives increase performance by 13%
	Customer referrals	Gershon et al. (2020)	✓	✓	✓	✓			✓	Self-benefiting incentives increase average number of articles per contributor, but not article quality
	Recycling campaign; providing image URLs	Schwartz et al. (2021)	✓	✓	✓	✓			✓	Prosocial incentives increase sign-up rates more than self-benefiting incentives No significant effect of low prosocial incentives on participation; significantly negative effect of high prosocial incentives on participation
Games	Wall-sit task, anagram task	Khan et al. (2020)	✓	✓	✓	✓		✓		Self-benefiting incentives increase performance when the amount is high; prosocial incentives yield the same performance independent of amount; low-amount self-benefiting incentives become more motivating when affective value is enhanced, and low-amount prosocial incentives become less motivating when affective value is attenuated
	Hand dynamometer squeezing task	Imas and Loewenstein (2018)	✓			✓		✓		Performance does not react to the size of prosocial incentive in conditions of low tangibility
	Hand dynamometer squeezing task	Imas (2014)	✓	✓	✓	✓		✓		Performance increases along with the amount of self-benefiting incentives; performance stays relatively constant as the amount of prosocial

(Continues)

TABLE 1 (Continued)

Setting	Task	Study	Perfor- mance	Partici- pation	Self- benefiting incentives	Prosocial incentives	Mix of incentives	Lab or online experiment	Field experiment	Main finding
	Dragging balls on a computer screen; solving arithmetic puzzles	Heyman and Ariely (2004)	✓	✓	✓			✓		incentives increase; individuals choose to work for prosocial incentives at low amounts and for self-benefiting incentives at high amounts  Self-benefiting incentives of a small amount decrease performance; increasing the incentive amount increases performance

Comparing the effects of prosocial and self-benefiting incentives, the former is usually more effective at raising performance than the latter when the incentive budget is limited (e.g., Charness et al., 2016). However, Khan et al. (2020) also show that this advantage of prosocial incentives can disappear when the incentive is perceived to have low affect. Their results shed light on the boundaries within which low-amount prosocial incentives can increase performance, thereby offering implications for anyone wishing to maximize performance on a limited budget.

### 2.3 | Effect of self-benefiting and prosocial incentives on participation

While many studies focus on performance conditional on participation (Brüggen & Dholakia, 2010; Schwartz et al., 2021), since they are conducted in a lab environment and cannot record subjects' opt-in decisions, a few studies also examine how incentives affect participation, for example, in contexts where researchers send survey invites by mail. Hereafter, we discuss the effects of self-benefiting incentives and, subsequently, the effects of prosocial incentives on participation.

#### 2.3.1 | Effect of self-benefiting incentives on participation

Regarding self-benefiting incentives, participation tends to increase along with the incentive amount. This has been found consistently across different settings including survey- (e.g., Blohm & Koch, 2013; Bosnjak & Tuten, 2003; Furse & Stewart, 1982; Göttritz & Luthe, 2013; Göttritz & Wolff, 2007; Heerwegh, 2006; Warriner et al., 1996) and non-survey tasks, such as tasks requiring altruistic behavior (Yin, Li, and Singh, 2020) and work-related tasks, for example, publishing articles on an online platform (Chen et al., 2019). However, in one study about blood donations, Lacetera and Macis (2010) demonstrate that also the opposite can happen, that is, that providing a cash incentive can significantly decrease participation. The authors argue that this occurred because the self-benefiting incentive reduces the altruistic behavior's reputational benefits (Ariely et al., 2009; Labroo & Goldsmith, 2021; White et al., 2020).

#### 2.3.2 | Effect of prosocial incentives on participation

Regarding prosocial incentives, offering a low amount usually does not significantly affect participation likelihood, and increasing the incentive amount can even significantly decrease participation likelihood. This has been found consistently across settings including survey- (e.g., Cohen et al., 2019; Furse & Stewart, 1982; Gendall & Healey, 2010; Göttritz & Neumann, 2016; Warriner et al., 1996) and non-survey tasks, in particular, work-related tasks (Schwartz et al., 2021).



People perceive a tradeoff between helping others and investing the same time in an activity that benefits them, which can make them opt out of the task (Berman & Small, 2012; Schwartz et al., 2021). The phenomenon of moral wiggle room further argues that people tend to avoid prosocial opportunities because they create feelings of social pressure or guilt and can force people to behave more prosocial than they would like to of their own accord (e.g., Dana et al., 2007; Gneezy et al., 2014).

An exception from the described patterns are the findings by Gershon et al. (2020), who show in the context of customer referrals that prosocial incentives (i.e., those which benefit the referred party) are more effective at raising sign-up rates than self-benefiting incentives (i.e., those which benefit the referring party; Gershon et al., 2020). However, this setting is different from the typical donation incentive.

## 2.4 | Effects of mixing prosocial and self-benefiting incentives

Comparatively, little is known about mixing prosocial and self-benefiting incentives. Among the notable exceptions, the study by Newman and Cain (2014) finds that people evaluate a company's charitable efforts as worse if the company also derives a personal benefit (tainted-altruism effect) due to the belief that the company could have behaved more altruistically in the absence of self-interest. Similarly, Feiler et al. (2012) find that emphasizing egoistic and altruistic reasons reduces people's donation likelihood because they perceive it as a persuasion attempt and show reactive behavior.

While these papers offer insights into the interplay of self-benefiting and prosocial reasons when it comes to people's moral perceptions and altruistic behavior, they (i) do not study how the combination of self-benefiting and prosocial incentives affects customers' responses to company surveys in terms of performance and participation and (ii) leave out the incentive amount as a potential moderator. With the present research, we aim to address these shortcomings by studying how the offer of prosocial incentives on top of self-benefiting incentives affects customers' performance and participation.

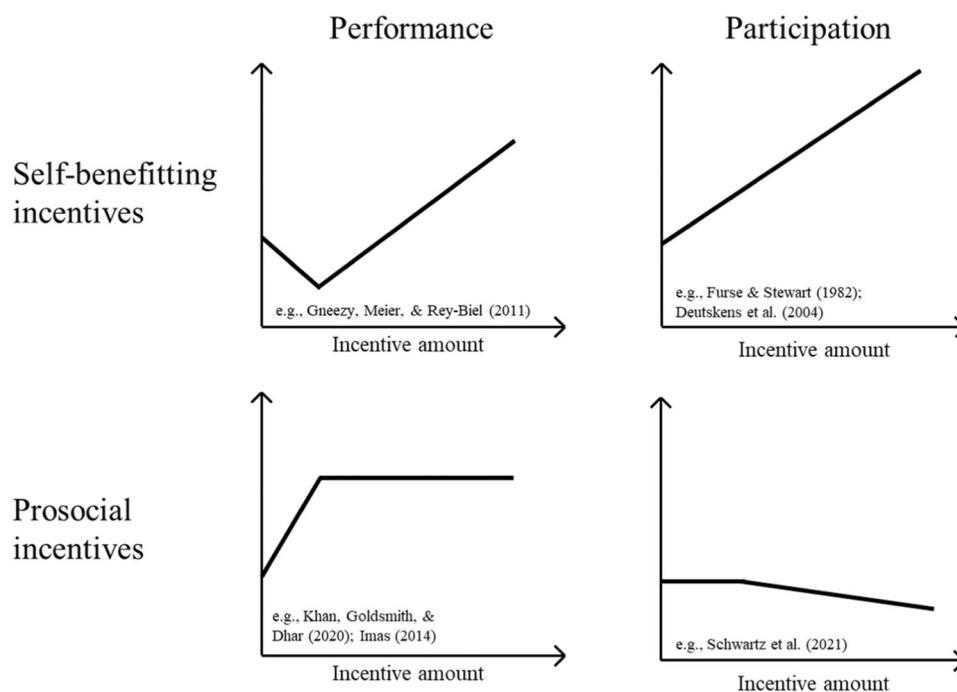
Overall, extant literature yields consistently similar results across varied settings, as illustrated in Figure 1. The figure demonstrates that neither incentive type in isolation is suited to raise performance and simultaneously participation with a low incentive budget.

## 3 | HYPOTHESES

We subsequently develop hypotheses on how on-top prosocial incentives affect performance and participation. We first derive our hypotheses related to performance (H1a and H1b) and then our hypotheses related to participation (H2a and H2b).

### 3.1 | Hypotheses related to performance

We expect respondents to derive a different affective value from an on-top prosocial incentive, offered in addition to a self-benefiting incentive, than from a prosocial incentive in isolation. Respondents



**FIGURE 1** Incentives' effects on performance and participation.

may perceive the fact that they stand to gain something through the self-benefiting incentive to be somewhat incongruent with acting altruistically and working for the prosocial incentive. We foresee this perception to be exceptionally high if the prosocial incentive is relatively small in amount. It gives respondents the impression of working "mostly" for themselves and "just a little" for others. Olivola and Shafir (2013) provide evidence that people tend to behave more prosocially when the prosocial act requires them to employ substantial effort (or experience pain) in what they call the martyrdom effect. Being promised a personal gain through the self-benefiting incentive might prevent such an effect from unfolding: People may perceive their behavior as less of a sacrifice to the benefit of others because they directly receive compensation.

Following this argument, the combined incentive will likely evoke a different set of norms than an isolated prosocial incentive would. Rather than evoking a norm of social responsibility and a tendency to help, the incentive may create an expectation of reciprocity, that is, of receiving adequate compensation for the effort employed (Groves et al., 1992). In this way, a low on-top prosocial incentive may be perceived as a weak source of affective value and may not increase performance like a low-amount isolated prosocial incentive would. The incentivizing party can no longer reap the usual advantages of prosocial incentives, that is, high performance independent of the incentive amount, as described in warm glow theory (c.f., Andreoni, 1989; Imas, 2014). On the contrary, if an on-top prosocial incentive in this setting is perceived in much the same way as a self-benefiting incentive, performance may even react negatively to a small incentive amount because it is viewed as inadequate compensation (c.f., Gneezy et al., 2011). We summarize this expectation in the following hypothesis:

**H1a:** Adding a low on-top prosocial incentive in addition to a self-benefiting incentive decreases performance relative to a pure self-benefiting setting.

As the amount of the on-top prosocial incentive increases, people will start to feel like they are working relatively more for others and relatively less for themselves. As a result, they anticipate attributing a larger share of their effort to the prosocial incentive, and the prospect of now making a relatively higher sacrifice for the benefit of others could motivate them (Olivola & Shafir, 2013). As the relative importance of the self-benefiting incentive declines, respondents might view the combined incentive as predominantly prosocial. As a consequence, they will be less focused on reciprocity and on maintaining an adequate compensation, but instead feel a higher responsibility to help others (Groves et al., 1992). This, in turn, may enable them to derive a high affective value from the on-top prosocial incentive, consequently leading to an increase in performance (e.g., Imas, 2014). This implies that an increase in the incentive amount from low to high should raise performance again. We summarize this expectation in the following hypothesis:

**H1b:** A further increase in the on-top prosocial incentive increases performance.

### 3.2 | Hypotheses related to participation

Concerning participation, we argue in analogy to Schwartz et al. (2021) that a low-amount prosocial incentive will yield participation rates comparable to those in the baseline condition of no incentive. Furthermore, we expect subjects to avoid participation if they are promised a relatively high prosocial incentive. The reason is that, as the prosocial incentive amount increases, it may start creating an unwanted perceived urge for subjects to behave more prosocially than they would like on their own accord (e.g., Dana et al., 2007; Gneezy et al., 2014). As a result, subjects face a tradeoff between helping others and investing the same time in an activity that benefits them, which can yield negative emotions and make them opt out of the task (Berman & Small, 2012). Apart from that, the combination of a prosocial and a self-benefiting incentive could be perceived by subjects as a persuasion attempt and make them feel like their behavior is unduly controlled by others (Feiler et al., 2012; Williams et al., 2004). While we believe that offering a low on-top prosocial incentive might not yet be perceived as a persuasion attempt, prospective participants may start feeling more controlled as the incentive amount rises. Therefore, we anticipate that a high on-top prosocial incentive can ultimately be a reason for prospective participants to simply ignore the task. We hypothesize the following:

**H2a:** Adding a low on-top prosocial incentive in addition to a self-benefiting incentive yields the same participation as a pure self-benefiting setting.

**H2b:** A further increase in the on-top prosocial incentive decreases participation.

## 4 | EMPIRICAL STUDIES

We conducted three empirical studies: Study 1 and 2 are field experiments in a Marketing setting (i.e., obtaining customer insights) and Study 3 is an incentive-aligned online experiment in a broader non-Marketing setting. With Study 1, we investigate the effect of a low on-top prosocial incentive relative to no on-top prosocial incentive on performance and participation, allowing us to test H1a and H2a. Study 2 extends the field experiment by adding a high on-top prosocial incentive, thereby allowing us to test also H1b and H2b. Study 3 is about identifying anagrams. With this experiment, we aim to investigate the role of affective value as a mediator. We also aim to replicate our field experiments' findings in a controlled setting that purposely deviates from the previous studies to obtain indications of generalizability. Figure 2 provides a summary overview of our empirical studies.

## 4.1 | Study 1 (field experiment)

### 4.1.1 | Aim

Study 1 is a field experiment conducted in a restaurant. This setting offers the advantage of high external validity and enables us to study participation and performance simultaneously. The study focuses on the effect of a low on-top prosocial incentive on performance and participation, allowing the test of H1a and H2a.

### 4.1.2 | Setting

The restaurant serves every ordered drink in a specially designed, NFC-enabled drinking glass (Smartglass), and customers can interact with it during their visit. Through a unique printing technology, the Smartglass is equipped with an NFC chip placed behind a printed label (see Figure 3). Customers can “scan” the Smartglass by placing their NFC-enabled smartphone near a label on the glass, which reads “Connect with NFC here.” The scan triggers an innovative object-related communication technology, which connects everyday objects (here, the glass) to unique digital artifacts (here, the online questionnaire, which uses the ID of the glass to test whether the respondent found one of the winning glasses). Customers find a flyer on the table with instructions on how to scan the glass. They receive the information that they can win something, however, unless they engage in a scan, they obtain no information on the incentive or what happens after scanning. Each scan is automatically captured in the Cloud, alongside information like the ID of the scanned glass, scan time, glass size, and type of phone used.

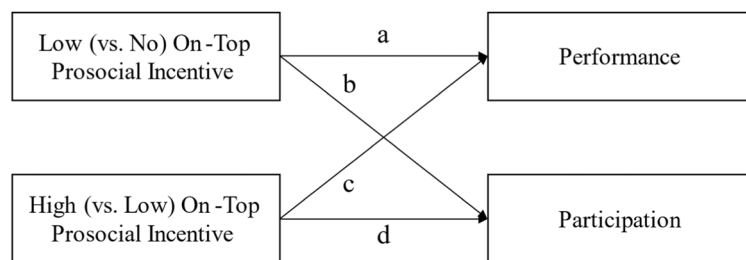
Once customers scan a glass, they learn that they can fill in a short mobile survey, through which the restaurant asks them to share some information that it could otherwise not obtain. The manipulated landing page informs customers about the specific incentive on that day, which includes lottery prizes ranging from a voucher for the next

visit or a craft beer set to use at home to instant prizes like a small selection of sample beers. At the end of the survey, customers instantly obtain the information whether they “found” a winning glass. If so, the restaurant hands out the prize, puts the glass away for the rest of the week, resets all glasses at the end of a week, and then picks new winning glasses for the coming week.

The survey consisted of few short questions and asked customers for their year of birth, their gender, whether they have used NFC before, when their scan took place (when the glass was full, more than half full, less than half full, or empty), and what their primary motivation for scanning was (scanning out of curiosity, to win in the lottery, to demonstrate knowledge in front of friends, due to information from other guests, due to observing other guests, or due to hearing about it before the visit). The survey also asked customers two identification questions, the first four letters of their street name and their day of birth, which serve the restaurant as an anonymized, unique customer identifier. If a customer orders another drink, they can participate in the survey again to have another chance to find one of the winning glasses, and the restaurant can use the identifier to track such repeat usage. Figure 4 visualizes the experimental setup in a flow diagram.

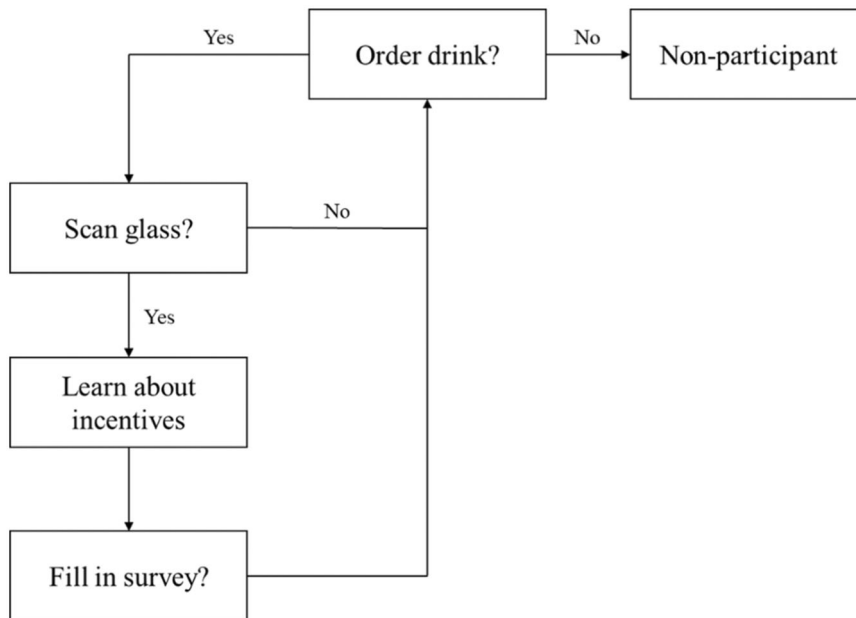


FIGURE 3 Illustration of Smartglass used in field experiment.



	Path a	Path b	Path c	Path d	Test for Mediation by Affective Value	Field Experiment	Controlled, Incentive-Aligned Online Experiment
Study 1	✓	✓				✓	
Study 2	✓	✓	✓	✓		✓	
Study 3	✓	✓	✓	✓	✓		✓

FIGURE 2 Overview of empirical studies.



**FIGURE 4** Flow diagram of experimental setup.

Study 1 spans a time horizon of 4 weeks in 2020, at times with stable COVID regulations in place. The Smartglass was a relatively new addition to the restaurant at that time. The restaurant was consistently open 5 days per week.

#### 4.1.3 | Experimental manipulation

We manipulated the incentives in the following way: We always offered the self-benefiting incentives. Each day, we manipulated whether a low on-top donation was offered (on-top donation of €0.10 to a local nonprofit organization vs. self-benefiting incentive alone). Appendix A provides further details.

#### 4.1.4 | Outcome measures

We examine the effect of our experimental manipulations on respondents' performance and participation. We measure performance by testing whether respondents provided answers to our two identification questions which are incorrect according to objective standards. A response is deemed incorrect if the provided street name initials do not match those of any of the street names in a comprehensive street list of Germany or if the customer indicated a nonsensical number as their day of birth. While we acknowledge that this measure likely underestimates the number of incorrect entries (and thereby overestimates performance) since an answer can be incorrect in other ways, we view our measure as a lower-bound estimate of incorrect responses.

We define participation as the percentage of Smartglass scans leading to full survey responses. Since we informed customers about the incentive on the landing page after scanning the glass, the scan count, not customer count, sets the baseline for participation, that is,

participation is measured by the percentage of customers who complied and filled out the survey after learning about the incentive. Appendix B examines if the experimental setup influenced scanning frequency, for example, through word of mouth among tablemates. The analysis results do not demonstrate a statistically significant confounding effect.

#### 4.1.5 | Sample and descriptives

A total of 6780 beers were served in a Smartglass, of which 24.96% were scanned (1,692 scans). Of the 1475 completed survey responses (87.17% of all scans), 4.88% contained incorrect data (72 surveys), that is, an objectively wrong street name, day of birth, or both.

The majority of survey responses came from male customers (68.41%) and customers born between 1980 and 1999 (60.07%). As in Study 1, most scans were conducted out of curiosity (38.78) or to win a prize (32.41%). Customers typically scanned relatively early after ordering a beer, with 66.92% of scans occurring on glasses that were more than half full. 70.31% of all scans were carried out by respondents who had not used NFC before, indicating Smartglass' ability to trigger first-time NFC usage.

#### 4.1.6 | Effect of on-top prosocial incentives on performance

We regress respondents' performance onto our experimental manipulation, that is, whether a low on-top donation was offered or not, while including several control variables related to the setting. Since we conducted a field experiment in a restaurant, factors other than our experimental manipulation varied over time and across

scans. In particular, we control for the respective lottery prizes offered over time, guests' prior NFC experience, the type of glass scanned (glasses existed in two sizes), the timing of the scan (hour of the day and whether it happened on the weekend or a weekday), and weather conditions (temperature, rain; Muñoz Sabater, 2019). In Study 1, the temperature was excluded due to multicollinearity issues. In Table 2, we present a summary of the results.

Offering a low on-top donation relates negatively to customers' performance relative to offering no on-top donation ( $p < 0.05$ ), which supports H1a. We also examined the regression results when including respondent-related control variables (e.g., gender, year of birth). We found the effect to be robust in direction and level of significance.

#### 4.1.7 | Effect of on-top prosocial incentives on participation

Next, we investigate whether the on-top donation incentive affects participation, measured as the percentage of Smartglass scans which resulted in a complete survey response. To this end, we regress

participation onto our experimental manipulation while controlling for the afore-introduced setting-related variables. Temperature again had to be excluded from the regression due to multicollinearity issues. The results are presented in the right-hand side of Table 2.

We do not observe a significant effect of offering a low on-top donation on participation relative to offering no on-top donation ( $p > 0.1$ ). This result supports H2a. We conclude that the low-amount on-top donation is ineffective at increasing participation.

## 4.2 | Study 2 (field experiment)

### 4.2.1 | Aim

Study 2 tests the robustness of our findings from Study 1 and extends the results by also considering the effects of a high on-top prosocial incentive. Thereby, Study 2 enables us to test H1b and H2b together with H1a and H2a.

### 4.2.2 | Setting

Study 2 is a field experiment in the same restaurant setting as Study 1 and spans a time horizon of 8 weeks in 2021, with stable COVID regulations. By the time of this experiment, at least regular restaurant guests may have become more acquainted with the Smartglass, such that we can test whether our main results are robust beyond the initial introduction of the technology. As in Study 1, the restaurant was consistently open 5 days per week.

### 4.2.3 | Experimental manipulation

We manipulated daily whether a high on-top donation (donation of €0.50), a low on-top donation (donation of €0.10), or no on-top donation was offered. Again, customers learned about this on-top prosocial incentive on the first survey page along with the lottery incentive (see Appendix A).

### 4.2.4 | Outcome measures

We use the same measure for participation and performance as in Study 1. We tested whether the experimental manipulation affected scanning itself, for which we again found no statistical support (Appendix B).

### 4.2.5 | Sample and descriptives

A total of 14,041 beers were served in a Smartglass, of which 15.00% were scanned (2,106 scans). Of the 1,739 completed survey responses (82.57% of all scans), 6.38% contained incorrect data (111 surveys).

**TABLE 2** Logistic regression of performance and participation onto incentive conditions, Study 1.

Independent variables	DV: Performance		DV: Participation	
	$\beta$	$p$	$\beta$	$p$
Intercept	3.21	***	2.04	***
<i>Experimental manipulation:</i>				
Donation (low vs. none)	-0.55	**	-0.18	n.s.
<i>Setting-related control variables:</i>				
Lottery (nine craft beer sets vs. voucher)	0.70	*	-0.27	n.s.
Lottery (10 sample beers vs. voucher)	-0.36	n.s.	0.06	n.s.
Lottery (20 sample beers vs. voucher)	-0.10	n.s.	0.03	n.s.
Prior NFC experience (yes vs. no)	-0.60	**		
Glass size (large vs. small)	0.11	n.s.	-0.39	**
Hour of the day	-0.02	n.s.	0.01	n.s.
Weekend (vs. weekday)	0.65	**	0.16	n.s.
Rain [in mm]	0.11	**	-8.54	n.s.
$N$	1475		1692	
$R^2$	0.03		0.01	

Note:  $p < 0.001$  \*\*\*;  $p < 0.01$  \*\*;  $p < 0.05$  \*;  $p < 0.10$  .; and  $p > 0.10$  n.s.

The provided answers match those of Study 1: 69.70% male customers; 58.66% born between 1980 and 1999; 41.29% of the scans happened out of curiosity and 30.25% to win a prize; 61.30% of scans occurred on more than half-full glasses; and 66.02% of all scans were carried out by respondents who had not used NFC before.

#### 4.2.6 | Effect of on-top prosocial incentives on performance

The results are summarized in Table 3. We observe a significantly negative effect of offering a low on-top donation on performance relative to offering no on-top donation ( $p < 0.05$ ), replicating the results from Study 1 and lending further support to H1a. In addition, the trend reverses once a high on-top donation is offered: The performance observed when a high on-top donation is offered significantly exceeds the one observed when a low on-top donation is offered ( $p < 0.05$ ). Thereby, we find empirical support for H1b. We also examined the regression results when including further respondent-related control variables (e.g., gender, year of birth) and found the effects to be robust in direction and level of significance.

**TABLE 3** Logistic regression of performance and participation onto incentive conditions, Study 2.

Independent variables	DV: Performance		DV: Participation	
	$\beta$	$p$	$\beta$	$p$
Intercept	-0.72	n.s.	1.75	***
<i>Experimental manipulation:</i>				
Donation (low vs. none)	-0.48	**	0.12	n.s.
Donation (high vs. low)	0.68	**	-0.42	**
<i>Setting-related control variables:</i>				
Lottery (forty vs. five sample beers)	0.75	****	-0.29	**
Prior NFC experience (yes vs. no)	0.11	n.s.		
Glass size (large vs. small)	-0.41	*	-0.06	n.s.
Hour of the day	0.14	***	0.01	n.s.
Weekend (vs. weekday)	0.30	n.s.	-0.06	n.s.
Rain [in mm]	0.02	n.s.	0.05	*
Temperature [in °C]	0.09	***	-0.01	n.s.
$N$	1,739		2,106	
$R^2$	0.04		0.01	

Note:  $p < 0.001$  \*\*\*\*;  $p < 0.01$  \*\*\*;  $p < 0.05$  \*\*;  $p < 0.10$  \*; and  $p > 0.10$  n.s.

#### 4.2.7 | Effect of on-top prosocial incentives on participation

We do not observe a significant effect of offering a low on-top donation on participation relative to offering no on-top donation ( $p > 0.1$ ), replicating the results from Study 1 and lending support to H2a. Besides, we observe a significantly negative effect of offering a high on-top donation on participation relative to offering a low on-top donation ( $p < 0.05$ ), in line with H2b. The negative effect is in line with the findings by Schwartz et al. (2021) and adds to the discussed disadvantages of on-top donations in relation to performance: On-top donations are ineffective at a low amount and even detrimental to participation at a high amount.

### 4.3 | Study 3 (online experiment)

#### 4.3.1 | Aim

Study 3 aims to (i) replicate the findings from our field experiments under conditions of high internal validity, that is, in a more controlled online setting, (ii) investigate the mechanism behind the effect of on-top prosocial incentives on performance, and (iii) challenge the generalizability of the findings from the field experiments by using a completely different study setting and task. We intentionally diverged from the restaurant's previous marketing and beer setting, aiming for an incentive-aligned experimental setup which is based on extant studies in the literature, in this case Khan et al. (2020). Since extant findings in the literature are largely consistent across different settings that deviate from the classical survey setting (c.f., Table 1), we decided to use a game-based task in Study 3 as a setting-independent way to study the incentives' effects.

#### 4.3.2 | Setting

Study 3's questionnaire was inspired by the study in Khan et al. (2020). It started with a filler task, in which respondents evaluated several words regarding their perceived pleasantness on a 7-point Likert scale (1: very unpleasant; 7: very pleasant), followed by demographic questions (age, gender, occupation). Upon completion, respondents were informed that they now already earned their cash reward and that the official survey had ended.

After the filler task, our experiment began on a voluntary basis: We asked respondents whether they want to participate in an optional post-survey, in which they would be shown five jumbled words, that is, anagrams. Their task was to do their best in trying to rearrange the anagrams' letters such that a sensible word would emerge. The example "ETKBAS" -> "BASKET" illustrated the task. We adapted five of the six anagrams from Goldsmith and Dhar (2013) and Khan et al. (2020). Three anagrams were rather easy ("OOLSCH" -> "SCHOOL"; "SEUMO" -> "MOUSE"; "DINSLA" -> "ISLAND") and two anagrams were rather difficult ("FABELY" -> "LABEFY";

"UDARIVMIQU" -> "QUADRIVIUM"). Including the latter two anagrams is a crucial design choice because it allows us to measure how long respondents persist in trying to solve very difficult anagrams. To encourage respondents to do their best, they were promised a self-benefiting incentive in the form of a lottery: For every correct anagram, respondents had a chance to win £1, that is, a maximum of five chances, and every 50th correctly identified anagram won (expected reward value of a correct anagram: £0.02).

Besides the lottery, we manipulated whether respondents obtained an on-top prosocial incentive. After reading about the offered incentive, we asked respondents whether they wanted to participate and to indicate how they feel about the incentive on a seven-point Likert scale (1: strongly disagree; 7: strongly agree; "I would feel good working toward this incentive.", "Thinking about this incentive would make me feel good.", "I have positive feelings toward this incentive."). This scale was proposed by Khan et al. (2020) to measure an incentive's affective value. We did not include a measure of cognitive value since extant literature suggests that it is unaffected by the amount of a prosocial incentive and is mainly related to the self-benefiting reward (Khan et al., 2020). Besides, leaving out this construct allowed us to keep the survey concise. If a respondent chose not to participate, they were immediately redirected to the survey provider, whereas if they chose to participate, they first submitted their answers to the anagram task and were then redirected to the survey provider to signal survey completion. To attract respondents, we used Prolific. We implemented and executed the questionnaire using the online survey platform DISE (Schlereth & Skiera, 2012).

#### 4.3.3 | Experimental manipulation

We randomly assigned participants to one of three survey versions, which deviated in whether the respondents received no, a low (donation of £0.02 for every correct anagram), or a high (donation of £0.10) on-top prosocial incentive. In versions two and three, we had respondents evaluate the statement "I perceive the maximum donation amount as relatively high." on a seven-point Likert scale (1: strongly disagree; 7: strongly agree) before deciding whether they would like to participate.

#### 4.3.4 | Outcome measures

We measured performance and participation similar to Goldsmith and Dhar (2013) and Khan et al. (2020). Participation is the percentage of respondents completing the voluntary post-survey, independent of how many anagrams they solved. For performance, we followed Goldsmith and Dhar (2013), who argue that with two of the anagrams being very difficult to solve, performance captures to what extent respondents comply with our instructions to do their best possible and persist in solving the task despite its difficulty. This means that we measure performance as the effort, that is, the time

that a respondent invested into identifying a solution to the anagrams. Theoretically, an alternative performance measure could have been the number of correctly solved anagrams (see Appendix C). However, Goldsmith and Dhar (2013) argue against its use because the experiment was designed so that most respondents could solve the three easy but not the two difficult anagrams.

#### 4.3.5 | Sample and descriptives

A total of 603 respondents completed the survey, of which 91.87% (554) participated in the post-survey. These respondents solved an average of 2.94 anagrams and had a median post-survey completion time of 178.5 s. The sample is balanced in terms of gender (50.25% male), is UK-based, and has a mean age of 40.48 years. The majority of respondents are employees (64.56%).

#### 4.3.6 | Manipulation check

Before deciding whether to participate in the post-survey, respondents evaluated the statement "I perceive the maximum donation amount as relatively high." on a 7-point Likert scale (1: strongly disagree; 7: strongly agree). A two-sided t-test reveals that respondents in the condition with a maximum donation amount of £0.50 perceive the on-top prosocial incentive to be significantly higher than those in the condition with a maximum donation amount of £0.10 ( $\bar{X}_{£0.10} = 3.43$ ;  $\bar{X}_{£0.50} = 4.24$ ;  $t(401) = 5.36$ ,  $p < 0.001$ ). We conclude that our manipulation was successful.

#### 4.3.7 | Effect of on-top prosocial incentives on performance

We regress our experimental conditions, that is, whether a high, a low, or no on-top donation was offered, on the natural logarithm of performance, measured by the time respondents persisted in trying to solve the anagrams while controlling for respondents' gender, age, and occupation (Table 4). We take the natural logarithm of time since a quantile plot indicated that this transformation better approximates the time variable to the normal distribution. The results show that introducing a low on-top prosocial incentive does not significantly affect performance ( $p > 0.1$ ); therefore, we do not find support for H1a in the online experiment. However, once the amount of the on-top prosocial incentive increases further, the performance shows a significant increase ( $p < 0.1$ ), which is in support of H1b and replicates our findings from Study 2. Together, the results suggest that on-top prosocial incentives are not suited to increase performance when the budget is low and only become beneficial for higher incentive amounts.

We go onto test whether the effect of on-top prosocial incentives on performance is mediated by affective value (Cronbach's  $\alpha = 0.95$ ). To this end, we conduct a mediation analysis using

PROCESS Model 4 ( $n = 10,000$ ) by Hayes and Preacher (2014), with the on-top prosocial incentive amount as multicategorical independent variable (low amount as reference condition), affective value as mediator, gender, age, and occupation as control variables, and the natural logarithm of performance as dependent variable, following a procedure similar to Invernizzi et al. (2022). The model results are summarized in Figure 5.

Our results reveal a significant indirect effect of a high relative to low on-top prosocial incentive on performance through affective value (indirect effect = 0.02; 90% bootstrap confidence interval [CI]: [0.0009, 0.0385]). At the same time, there is no significant indirect effect of no relative to a low on-top prosocial incentive on performance through affective value (indirect effect = -0.01; 90% CI: [-0.0241 to 0.087]).

A high on-top prosocial incentive yields a significantly higher affective value than a low on-top prosocial incentive ( $a_2 = 0.18$ ,

$p < 0.1$ ), while affective value does not significantly differ between the conditions of no and a low on-top prosocial incentive ( $a_1 = -0.07$ ,  $p > 0.1$ ). This observation suggests that a warm glow effect, known to occur for prosocial incentives offered in isolation (e.g., Andreoni, 1989; Imas, 2014), does not hold in the case of on-top prosocial incentives. When regressing the on-top prosocial incentive conditions and affective value simultaneously on performance, affective value has a significantly positive effect on performance ( $b = 0.09$ ,  $p < 0.01$ ), whereas the effect of the high on-top prosocial incentive relative to the low incentive is no longer significant ( $c'_2 = 0.12$ ,  $p > 0.1$ ). Taken together, these results suggest that the effect of a high relative to low on-top prosocial incentive on performance is fully mediated by affective value.

#### 4.3.8 | Effect of on-top prosocial incentives on participation

We regress participation onto our experimental conditions while controlling for gender, age, and occupation (see Table 5). We do not observe a significant effect of offering a low on-top donation on participation relative to offering no on-top donation ( $p > 0.1$ ), lending support to H2a. Additionally, we observe a significantly negative effect of offering a high on-top donation on participation relative to offering a low on-top donation ( $p < 0.05$ ), in line with H2b. Thereby, we replicate our results from Study 1 and 2.

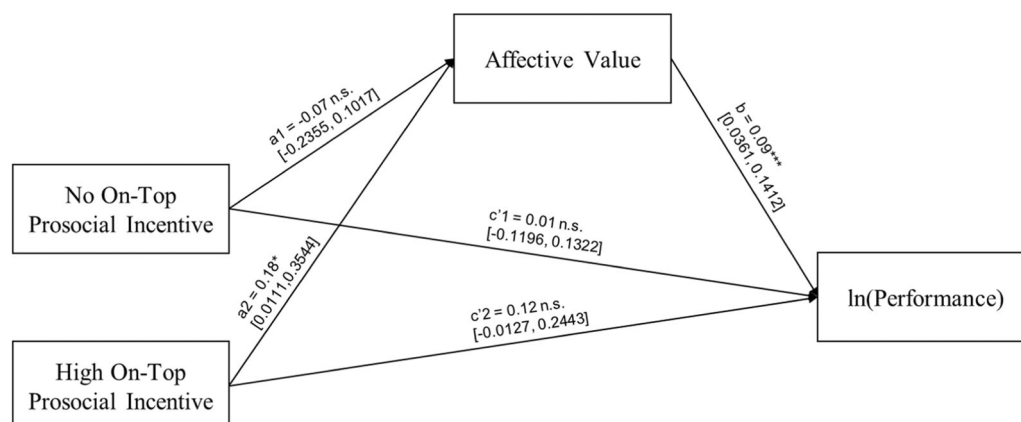
**TABLE 4** Regression of performance onto incentive conditions, Study 3.

Independent variables	ln(Performance)	
	$\beta$	$p$
Intercept	4.82	****
<i>Experimental manipulation:</i>		
Donation (low vs. none)	-0.00	n.s.
Donation (high vs. low)	0.13	*
<i>Control variables:</i>		
Gender (male vs. female)	0.14	**
Age	0.01	***
Occupation (employed vs. other)	-0.18	***
$N$	554	
$R^2$	0.06	

Note:  $p < 0.001$  \*\*\*\*;  $p < 0.01$  \*\*\*;  $p < 0.05$  \*\*;  $p < 0.10$  \*; and  $p > 0.10$  n.s.

## 5 | DISCUSSION AND CONCLUSION

Companies have traditionally offered either self-benefiting or prosocial incentives to motivate customers to participate in feedback surveys (participation) and provide accurate responses (performance). More recently, several companies have started offering an on-top prosocial incentive and a baseline self-benefiting incentive in the hope to achieve the advantages in performance and participation of



**FIGURE 5** Effect of no and high (relative to low) on-top prosocial incentive on performance through affective value.  $p < 0.001$  \*\*\*\*;  $p < 0.01$  \*\*\*;  $p < 0.05$  \*\*;  $p < 0.10$  \*; and  $p > 0.10$  n.s.



**TABLE 5** Logistic regression of participation onto incentive conditions, Study 3.

Independent variables	Participation	
	$\beta$	<i>p</i>
Intercept	2.68	****
<i>Experimental manipulation:</i>		
Donation (low vs. none)	0.23	n.s.
Donation (high vs. low)	-0.75	**
<i>Control variables:</i>		
Gender (male vs. female)	-1.07	***
Age	0.01	n.s.
Occupation (employed vs. other)	0.36	n.s.
N	603	
R <sup>2</sup>	.05	

Note:  $p < 0.001$  \*\*\*\*;  $p < 0.01$  \*\*\*;  $p < 0.05$  \*\*;  $p < 0.10$  \*; and  $p > 0.10$  n.s.

both incentives. The present paper investigates the effectiveness of this approach.

In principle, such an incentive combination could “sweeten the deal” because the two incentive types offer a certain complementarity. Prosocial incentives are suited to raise performance even with a limited incentive budget (Khan et al., 2020) but are ineffective at raising participation (Schwartz et al., 2021). On the other hand, self-benefiting incentives can decrease performance when the incentive amount is low (Gneezy & Rustichini, 2000). However, they are generally suited to raise participation (Furse & Stewart, 1982). Combining both incentive types could attenuate the drawbacks of either incentive and create a situation in which both performance and participation react positively to the offered incentive amount.

However, our results from two field experiments and one incentive-aligned online experiment do not reveal any such advantage. Performance stays constant or decreases when a low-amount on-top prosocial incentive is offered relative to the baseline of no on-top incentive. This trend only reverses once an on-top prosocial incentive of a higher amount is offered. Regarding participation, the on-top prosocial incentive is found to be ineffective and, at higher amounts, even detrimental. Therefore, the additional incentive seems to “poison the well.”

Our study provides essential managerial and theoretical contributions. Managerially, our findings call into question the continuation of incentivization schemes recently adopted by companies such as P&G. In particular, managers should be cautious about changing existing customer incentivization schemes by adding new elements in the form of on-top prosocial incentives because such initiatives can have unintended consequences. While managers often have a bias for action (Patt, 2000), our findings suggest that maintaining the status quo regarding customer incentivization may be the superior choice.

For marketers, our paper outlines different purposes of customer feedback surveys and describes for each purpose whether it is more important to focus on participation, performance, or both jointly. For example, if a company's goal is to leverage the mere measurement effect (Borle et al., 2007), it will be relatively more interested in raising participation, whereas if its goal is to understand customer pain points (Brown, 2008), it will primarily want to raise performance. A company's particular goal may then decide which incentive is most suitable. Depending on the goal, Figure 1 guides managers whether prosocial or self-benefiting incentives are better suited.

From a theoretical perspective, our findings highlight that the predictions of utility theory (Jensen, 1967) may not hold in the context of on-top prosocial incentivization. While utility theory would predict that adding more incentives should increase customers' utility and, as a result, raise their performance, our empirical results do not support this. Our findings suggest that adding a different type of incentive can change the overall perception of incentives and alter how respondents process them. Respondents do not evaluate each part of the incentive individually, but instead, depending on the incentive mix, they view it as either predominantly self-benefiting or prosocial. This predominant view, in turn, determines whether respondents derive a high affective value from the incentive and, ultimately, whether the incentive can raise performance.

The present work gives rise to several potential avenues for future research. First, we encourage future research to conduct further field experiments to test the generalizability of our findings. For example, future research could investigate what happens when the baseline self-benefiting incentive is a performance-dependent cash reward and not, as in the case of our lottery, a probabilistic outcome. This distinction could be important from a theoretical point of view because whether the self-benefiting incentive is probabilistic could alter its relative perceived importance depending on participants' risk preferences. Earlier, we argued that the perception of the incentive may change from predominantly self-benefiting to predominantly prosocial as the amount of the on-top prosocial incentive increases. Suppose respondents are risk averse and heavily discount the self-benefiting incentive in light of its uncertain payout. In this case, the switch in perception might happen much faster than if the self-benefiting incentive had a certain payout. Further, this distinction is important from a practical point of view because out of the companies that offer on-top prosocial incentives, some indeed provide a cash reward as a baseline self-benefiting incentive. For these companies, it is essential to know whether our findings generalize to their specific incentive scheme to make an informed decision about the potential discontinuance.

Second, future research could test our findings' robustness using alternative performance operationalizations within field studies. Our field studies focus on the correctness of data shared in a survey setting. It would be interesting to see whether other types of performance react similarly to on-top prosocial incentives. Our literature review provides a helpful overview in this regard,

summarizing several different tasks that have been studied in extant research, including tasks related to altruistic behavior, work-related tasks, or game-based tasks. For example, Khan et al. (2020) examine subjects' persistence in a physically demanding task.

Since Study 3 focuses on a game-based task, future research could run further online experiments that look at other participation and performance tasks in a marketing- and survey-related setting. For example, understanding customer pain points is essential to support companies in the ideation phase to develop innovations (e.g., Brown, 2008). Many companies use design thinking, a holistic approach to addressing customer problems, and in this setting, need to gain insights into customer experiences. Thus, it is essential to motivate customers to share their challenges, especially those often overlooked. Future studies could ask experienced customers to detail unpleasant scenarios in their interactions with a company and suggest improvements. Participation metrics might include the response rate, while performance could gauge the depth and time spent detailing experiences and ideas.

In the present paper, we test a potential mechanism behind the effect of on-top prosocial incentive amounts on performance by looking at affective value. While we find evidence that affective value indeed mediates the relationship, future research should test alternative process hypotheses and thereby rule out the potential influence of other mediators. Ultimately, this could inform the development of appropriate intervention strategies. For example, potential intervention strategies for future research to test include using a more emotionally charged message framing or increasing the salience of the on-top prosocial incentive by highlighting what even a low donation amount can achieve for the beneficiaries.

As more and more customers get used to being offered on-top prosocial incentives, we cannot preclude that they might gradually become more receptive to this kind of incentivization. Therefore, future research should aim to disentangle to what extent our findings are driven by the mere novelty of the incentive scheme as compared to deep-rooted consumer psychology and preferences. Similarly, the proposed incentive scheme's medium- and long-term consequences should be evaluated. Companies are arguably less interested in the answers to a single customer feedback survey but more in developing answers over time and customers' continued engagement. Longitudinal field studies could capture such effects.

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## CONFLICT OF INTEREST STATEMENT

The author declare no conflict of interest.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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## APPENDIX A

See Table A1.

**TABLE A1** Experimental design of the field experiments, Studies 1 and 2.

Week	Day	Restaurant's lottery prizes	Donation condition	Restaurant's lottery prizes	Donation condition
1	1	One chance to win a voucher for a free meat platter	None	Five chances to win a selection of sample beers	None
	2		Low (€0.10)		Low (€0.10)
	3		None		None
	4		Low (€0.10)		Low (€0.10)
	5		None		None
2	1	Twenty chances to win a selection of sample beers	None	Forty chances to win a selection of sample beers	None
	2		Low (€0.10)		Low (€0.10)
	3		None		None
	4		Low (€0.10)		Low (€0.10)
	5		None		None
3	1	Nine chances to win a craft beer set	None	Five chances to win a selection of sample beers	None
	2		Low (€0.10)		High (€0.50)
	3		None		None
	4		Low (€0.10)		High (€0.50)
	5		None		None
4	1	Ten chances to win a selection of sample beers	None	Forty chances to win a selection of sample beers	None
	2		Low (€0.10)		High (€0.50)
	3		None		None
	4		Low (€0.10)		High (€0.50)
	5		None		None
5	1			Five chances to win a selection of sample beers	None
	2				Low (€0.10)
	3				None
	4				Low (€0.10)
	5				None
6	1			Forty chances to win a selection of sample beers	None
	2				Low (€0.10)
	3				None
	4				Low (€0.10)
	5				None
7	1			Five chances to win a selection of sample beers	None
	2				High (€0.50)
	3				None
	4				High (€0.50)
	5				None

(Continues)

TABLE A1 (Continued)

Week	Day	Restaurant's lottery prizes	Donation condition	Restaurant's lottery prizes	Donation condition
8	1			Forty chances to win a selection of sample beers	None
	2				High (€0.50)
	3				None
	4				High (€0.50)
	5				None

## APPENDIX B

Table B1 summarizes the scan rates in each experimental condition, separately for Study 1 and 2. For each study, we ran an ANOVA to test whether there are any significant differences in the daily scan rates across conditions. The results confirm that there are no significant differences, neither in Study 1 ( $F(1, 18) = 0.15, p > 0.1$ ) nor in Study 2 ( $F(2, 37) = 1.54, p > 0.1$ ). We conclude that the decision to scan is not affected by the provided incentives and, therefore, our field studies constitute proper experiments.

TABLE B1 Scan rates by experimental condition, Studies 1 and 2.

On-top prosocial incentive	Scan rates	
	Study 1	Study 2
None	23.75%	13.77%
Low	25.09%	16.66%
High	-	16.76%

## APPENDIX C

Table C1 provides the results of regressing the number of correctly solved anagrams onto the incentive conditions. Similar to the results of Goldsmith and Dhar (2013), we find no significant effect of the experimental manipulations ( $p > 0.1$ ). This is simply an artifact of our experimental design, which was set up with the expectation that most respondents should be able to solve the three easy, but not the two difficult anagrams (Goldsmith & Dhar, 2013).

TABLE C1 Regression of number of correct anagrams onto incentive conditions, Study 3.

Independent variables	Number of correct anagrams	
	$\beta$	$p$
Intercept	3.13	****
<i>Experimental manipulation:</i>		
Donation (low vs. none)	-0.11	n.s.
Donation (high vs. low)	0.18	n.s.
<i>Control variables:</i>		
Gender (male vs. female)	0.20	**
Age	-0.01	*
Occupation (employed vs. other)	-0.19	*
N	554	
$R^2$	.02	

Note:  $p < 0.001$  \*\*\*\*;  $p < 0.01$  \*\*\*;  $p < 0.05$  \*\*;  $p < 0.10$  \*; and  $p > 0.10$  n.s.