

# WHEN LUMP-SUM (VS. PERIODIC) GIVING ENCOURAGES DONATIONS: THE ROLE OF JOINT VS. SEPARATE APPEALS

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Cite as:

XU MINGHAO, Basu Shankha, Anderson Rajen, Brakus J. Jo $\diamond$ ko (2026), WHEN LUMP-SUM (VS. PERIODIC) GIVING ENCOURAGES DONATIONS: THE ROLE OF JOINT VS. SEPARATE APPEALS.

*Proceedings of the European Marketing Academy, 55th, (133584)*

Paper from the 55th Annual EMAC Conference, Bath, United Kingdom, June 2-5, 2026



## **WHEN LUMP-SUM (VS. PERIODIC) GIVING ENCOURAGES DONATIONS: THE ROLE OF JOINT VS. SEPARATE APPEALS**

Do more payment options help or hurt potential donors' willingness to give? Three preregistered experiments show that charities can simply present periodic and lump-sum donation appeals jointly to increase donation intentions, performing significantly better than presenting the periodic appeal alone. We found an increase in donation intention for the lump-sum option under joint evaluation. Additionally, this effect is driven at least in part by changes in perceived magnitude: the lump-sum amount is perceived as less substantial when presented together with a periodic frame than when presented separately, compared with separately. These results suggest that the preference for periodic donation appeals narrow under joint evaluation, leading to an overall increase in donation intentions due to a decrease in the perceived magnitude of lump-sum appeals.

*Keywords: temporal framing, donation, joint versus separate evaluation*

*Track: Consumer Behaviour*

## 1. Introduction

Charities often present donors with multiple ways to make their donations. For example, when a donor is asked to contribute \$250 in total over the course of a year, they may give either as a recurring gift of \$5 per week (i.e., a periodic donation) or as a single payment of \$250 (i.e., a lump-sum donation) (Schaumberg & Lin, 2023). Past research suggests that periodic appeals boost donation intentions (Atlas & Bartels, 2018; Gourville, 1998, 1999, 2003). However, does it matter if charities present these two options together or separately? Are potential donors more willing to give when they see both periodic and lump-sum appeals together versus when they see only one of these appeals?

Previous work suggests that offering multiple choices in altruistic contexts can backfire: Ein-Gar et al. (2021) found that presenting multiple potential beneficiaries can reduce fundraising effectiveness, as the desire to be helpful and fair may conflict. Additionally, offering too many options may lead to choice overload, which can also potentially decrease donation willingness (Mulder & Joireman, 2016).

However, there is limited research on jointly versus separately presenting price framing in fundraising contexts. Zheng et al., (2024) found a preference reversal when numerical attributes are evaluated jointly, but category attributes are evaluated separately. Moreover, some studies show conflicting results regarding how price framing influences perceptions, which may be due to differences between joint vs. separate evaluation conditions they used. Basu(2021) reported that participants rated periodic framing as less morally praiseworthy than aggregate framing because it was perceived as requiring less personal sacrifice and providing fewer benefits to the recipient. In contrast, Schaumberg and Lin (2023) demonstrated that participants who jointly compared two donation appeals reached the opposite conclusions because they thought donating bit by bit felt more impulsive. These findings raise the question of whether joint versus separate presentation can affect potential donors' perceptions and preferences, thus influencing fundraising effectiveness.

In this research, we investigate whether presenting periodic and lump-sum donation appeals jointly, rather than separately, leverage donation intentions. Previous research shows that periodic donation framing tends to result in higher donations (Atlas & Bartels, 2018; Gourville, 1998, 1999, 2003) because it reduces the perception of how large a quantity is. We base our predictions on this body of research, theorising that when people view the two appeals as

equivalent amounts, the presence of the periodic frame can also reduce the perceived magnitude of the requested lump-sum donation. As such, the preference for periodic appeals would decrease under joint conditions, and people are more likely to donate.

All methods, analyses and hypotheses for all three studies were preregistered. Preregistered information is available at <https://aspredicted.org/8sj9kf.pdf> (Study 1), <https://aspredicted.org/cm4fv2.pdf> (Study 2), and <https://aspredicted.org/be99vd.pdf> (Study 3).

## **2. Study 1**

In this study, we show that the preference for periodic donation appeal disappears under joint evaluation, where the lump-sum appeal is also presented. As discussed above, when presented together, potential donors should realise that the two donation appeals are equivalent. Thus, lump-sum appeal can also be mentally represented as a trivial daily cost (Gourville, 2003), which increases donation intention toward the lump-sum appeal. This unilateral increase should reduce, or even eliminate, the difference in donation intention between periodic and lump-sum donations by increasing the latter.

We recruited 405 U.S. participants from the Connect platform ( $M_{\text{age}} = 41.97$ ,  $SD_{\text{age}} = 12.22$ ; 195 females, 206 males, 4 others).

Participants were randomly assigned to one of four conditions: 2 (evaluations: joint vs. separate) X 2 (response: periodic vs. lump-sum). Participants in all conditions read about a charity that provides food, clothing, medical care, education, and emergency relief to children. Then they saw a picture with the donation appeal(s) information from this charity. In the joint evaluation condition, participants saw the picture containing both the periodic and the lump-sum donation appeals. In the separate evaluation condition, they saw only either the periodic or the lump-sum appeal. The periodic donation appeal was “\$5 per week for the next year” with information indicating that this was a recurring donation and that \$5 would be automatically deducted weekly from the bank account if you agreed to donate. The lump-sum donation appeal was “A single donation of \$250”, which would be deducted immediately.

After reading the scenario, participants were asked to report how likely they were to donate the requested amount allocated to them (assessed on a 7-point scale ranging from 1 = very unlikely to 7 = very likely). In joint conditions, participants saw both donation appeals but were randomly asked to respond to the donation intention item for only one of the two appeals.

We found a significant interaction effect on donation intentions ( $F(1, 401) = 5.92, p = .015, \eta^2 = .015$ ). In the separate condition, participants reported higher donation intentions in periodic condition ( $M = 3.25, SD = 2.12$ ) than in lump-sum condition ( $M = 2.11, SD = 1.56; t(186) = 4.367, p < .001, d = .611$ ). These results are consistent with previous literature showing that donors tend to prefer periodic donations and have higher donation intentions for periodic appeals compared to lump-sum appeals (Atlas & Bartels, 2018; Gourville, 1998, 1999, 2003). Furthermore, donation willingness for the periodic framing remained at a similar level in both the separate ( $M = 3.25, SD = 2.12$ ) and joint conditions ( $M = 3.22, SD = 2.07; t(199) = -.077, p = .938, d = -.011$ ).

However, this preference diminished in the joint evaluation condition, leading to relatively equal donation intentions between periodic and lump-sum framing (periodic:  $M = 3.22, SD = 2.07$ ; lump-sum:  $M = 3.04, SD = 2.10; t(199) = 0.623, p = .534, d = .088$ ). This provides strong support for the reduced preference gap when the lump-sum option is presented. Finally, the overall average donation intention was higher in the two joint evaluation conditions ( $M = 3.13, SD = 2.08$ ) compared to the separate evaluation conditions ( $M = 2.68, SD = 1.94; F(1, 401) = 5.36, p = .021, \eta^2 = .013$ ).

These results support our theory that presenting periodic and lump-sum frames together can erase the general preference for periodic framing. Furthermore, we found an overall increased average donation intention under the joint condition, which may also be driven by a unilateral increase in donation intention for the lump-sum option.

### **3. Study 2**

Past literature indicates that the framing of requested amounts can affect the total donation amount, which may not be reflected in the average donation intentions, as people may behave differently and contribute to lower donation rates (Edwards & List, 2014; Goswami & Urmitsky, 2016). We further examined this by assuming that presenting a periodic appeal alongside a lump-sum option can significantly increase the total donation rate and, in turn, impact the donation scale using a single-choice question.

Additionally, we rule out a possible explanation for the increased donation intention under the lump-sum framing: that participants may have read only one appeal and ignored the other payment option or assumed it was monetarily equivalent, as both were presented in the same

picture. Participants were then asked to indicate their preference specifically for the lump-sum or periodic appeal. We varied the presentation order and compared donation rates for lump-sum and periodic appeals under two between-subject joint conditions.

We recruited 400 U.S. participants from the Connect platform ( $M_{\text{age}} = 41.7$ ,  $SD_{\text{age}} = 12.68$ ; 192 females, 204 males, 4 others).

Participants were randomly assigned to one of four conditions: periodic separate evaluation, lump-sum separate evaluation, periodic-first joint evaluation, or lump-sum first joint evaluation. As in Study 1, participants read a scenario about a charity that helps needy children, then viewed the donation appeal(s).

In this study, participants in the separate conditions saw only one appeal and then answered a single-choice question about the donation rate, choosing between “Yes, I would donate” or “No, I would not donate.” In contrast, participants in the joint conditions read both appeals in different orders. In the periodic-first (lump-sum) joint evaluation condition, we presented the periodic (lump-sum) appeal first to exclude alternative explanations. Participants then answered a single-choice question with three options: “Donate \$250 one time,” “Donate \$5 per week for the next year,” or “I would not donate to either.” This allowed us to measure participants' non-donation rate and donation rates for both periodic and lump-sum appeals.

Firstly, participants found it harder to decline donation appeals and showed a significantly higher average donation rate in the combined joint conditions (59.0%) than in the combined separate condition ((29.5%),  $\chi^2(1, N = 400) = 35.28$ ,  $p < .001$ ,  $\phi = .30$ ). Notably, even the periodic appeal, which has been widely recognized in prior research as effective in increasing donation willingness (Atlas & Bartels, 2018; Gourville, 1998, 1999, 2003), produced a lower average donation rate in the separate conditions ((34.0%),  $\chi^2(1, N = 300) = 16.67$ ,  $p < .001$ ,  $\phi = .24$ ) compared to the average donation rate in the joint conditions (59.0%).

Secondly, under combined joint conditions, the options of donating \$250 immediately (lump-sum 57%) and donating \$5 weekly (periodic 61%) did not significantly differ in donation willingness ( $\chi^2(1, N = 200) = .33$ ,  $p = .57$ ,  $\phi = .04$ ). The non-donation rate remained stable across the two joint conditions, excluding the possibility that the order of presentation may have distracted participants. We found no significant difference in donation willingness when the periodic appeal was presented first (43%) or after the lump-sum appeal ((39%),  $\chi^2(1, N = 200) = .33$ ,  $p = .57$ ,  $\phi = .04$ ).

Finally, we conducted three binomial tests to examine whether participants' choices deviated from random responding. Across all conditions, the observed non-donation rates were significantly higher than the corresponding chance probabilities (50% in the separate conditions and 33% in the joint condition), indicating systematic preferences rather than arbitrary choices.

These results provide further support for the proposal that lump-sum framing can be more appealing to participants and thus boost donation amounts when presented jointly with periodic framing. We also rule out the alternative explanation that presenting more options may distract potential donors and lead to random responses.

#### **4. Study 3**

In this study, we further explored the underlying mechanism by adding a mediator, perceived magnitude. Previous research has suggested that the increased attractiveness of periodic framing stems from its lower perceived cost and its mental representation as a trivial daily cost (Gourville, 1998, 1999, 2003). Basu and Ng (2021) argue that the possible reason for this is the numerosity heuristic, where people focus on the number and neglect the units. We propose that presenting periodic and lump-sum appeals together draws more attention to the comparison between the two numbers, thereby reminding potential donors that the two appeals are monetarily equivalent when considering both numbers and units. As a result, the reduced perceived magnitude of the requested lump-sum amount can boost donors' compliance rate and lead to a unilateral increased donation willingness under joint evaluation.

We recruited 400 U.S. participants from the Connect platform ( $M_{\text{age}} = 40.39$ ,  $SD_{\text{age}} = 11.89$ ; 185 females, 208 males, 7 others).

Participants were randomly assigned to one of four conditions: 2 (evaluations: joint vs. separate) X 2 (response: periodic vs. lump-sum). Participants in all conditions review a charity named "Fund for Animals", which rescues suffering animals. As in Study 1, participants then saw a picture containing donation appeal(s) from this charity. In joint evaluation conditions, participants saw both the periodic and lump-sum appeals but were randomly asked to report their donation intentions for only one of the two appeals using the same scale as in Study 1. In separate evaluation conditions, participants saw only one of two appeals randomly. In all conditions, participants rated the perceived magnitude of the requested donation amount (1 = very small, 7 = very large).

A  $2$  (evaluation)  $\times 2$  (response) ANOVA on donation intention revealed significant main effects of appeal ( $F(1,396) = 6.78, p = .010, \eta_p^2 = .017$ ) and evaluation ( $F(1,396) = 4.43, p = .036, \eta_p^2 = .011$ ), but no significant interaction ( $F(1,396) = 1.55, p = .214, \eta_p^2 = .004$ ). Planned simple comparisons then revealed a clear pattern consistent with previous studies. Under separate evaluation, donation intention was higher for the periodic appeal ( $M_{\text{periodic}} = 3.13, SD = 2.09$ ) than for the lump-sum appeal ( $M_{\text{lump-sum}} = 2.36, SD = 1.71; t(199) = 2.87, p = .004$ ). Under joint evaluation, this difference disappeared ( $M_{\text{periodic}} = 3.30, SD = 2.15; M_{\text{lump-sum}} = 3.03, SD = 2.07; t(197) = 0.91, p = .362$ ). Furthermore, while evaluation mode did not affect the periodic appeal ( $t(197) = -0.58, p = .566$ ), it significantly increased donation intention toward the lump-sum appeal ( $M_{\text{joint}} = 3.03$  vs.  $M_{\text{separate}} = 2.36; t(199) = -2.52, p = .013$ ).

Then, a similar  $2 \times 2$  ANOVA on perceived magnitude revealed a strong main effect of appeal ( $F(1,396) = 201.61, p < .001, \eta_p^2 = .337$ ) and a smaller main effect of evaluation ( $F(1,396) = 8.68, p = .003, \eta_p^2 = .021$ ). The interaction was not significant ( $F(1,396) = 0.21, p = .648, \eta_p^2 = .001$ ). Although the interaction was not significant, joint evaluation significantly reduced the perceived magnitude of the lump-sum appeal ( $M_{\text{joint}} = 5.31$  vs.  $M_{\text{separate}} = 5.81; t(199) = 2.74, p = .007, 95\% CI [.145, .725]$ ), whereas the periodic appeal showed no corresponding difference ( $M_{\text{joint}} = 3.28$  vs.  $M_{\text{separate}} = 3.65; t(197) = 1.59, p = .114$ ).

A moderated mediation analysis using PROCESS macro Model 7 with 5,000 bootstrap resamples (Hayes, 2022) was tested with appeal as X, perceived magnitude as M, donation intention as Y, and evaluation mode as W. Perceived magnitude significantly mediated the effect of appeal on donation intention in both separate (Effect =  $-.0039$ , 95% CI =  $[-.0054, -.0025]$ ) and joint evaluation (Effect =  $-.0036$ , 95% CI =  $[-.0050, -.0024]$ ). The index of moderated mediation was not significant (Index =  $.0002$ , 95% CI =  $[-.0007, .0013]$ ), suggesting that the mediation effect did not significantly differ between the two appeal types.

## 5. General Discussion

Providing more options may not always boost fundraising effectiveness as it can also cause conflicts (Ein-Gar et al., 2021) or choice overload (Mulder & Joireman, 2016). However, across three studies, we found that presenting periodic and lump-sum appeals jointly is more effective than presenting them separately. Specifically, the increase in donation willingness for the lump-sum appeal is driven by a decrease in its perceived magnitude under joint evaluations.

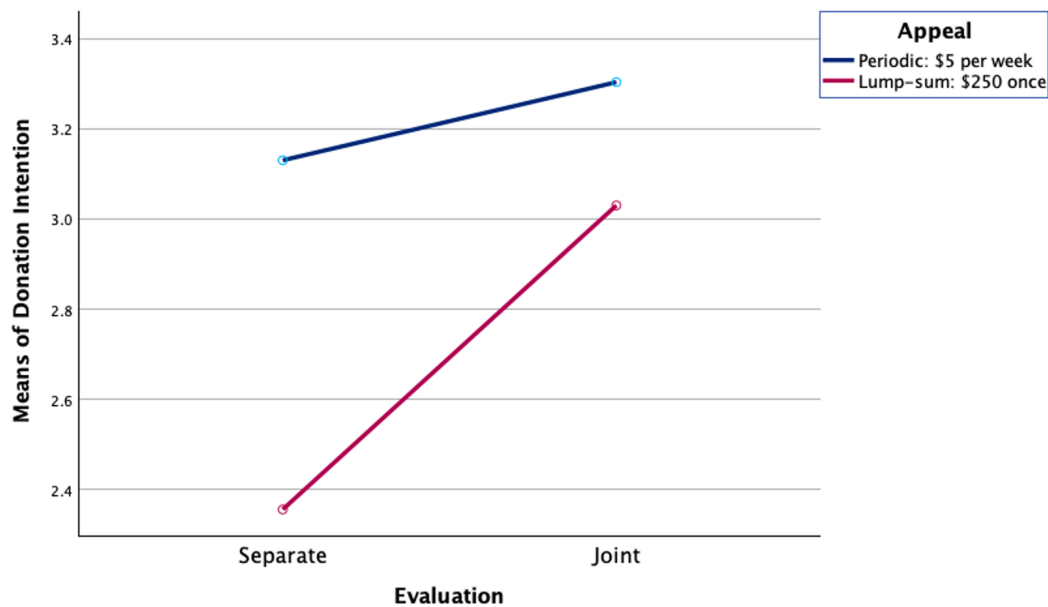
We rule out the possibility that the lump-sum appeal was ignored and instead claim that the increase in willingness is due to the attention drawn to the comparison of both numerical and textual information. As a result, the effect of the numerosity heuristics diminished, and the preference for the periodic appeal decreased. During this process, participants mentally represented the lump-sum frame as a trivial daily cost, as they realised the two appeals were monetarily equivalent, leading to a drop in the perceived magnitude of the lump-sum appeal. This ultimately led to the increased attractiveness of the lump-sum frame, attracting more potential donors willing to make a one-time gift.

Our work contributes to the philanthropy field, specifically in areas related to price framing or choice framing. First, this mechanism may help explain existing debates in the philanthropy field regarding how joint versus separate evaluation conditions can lead to different perceptions for different price framing (Basu, 2021; Schaumberg & Lin, 2023). Additionally, we found that joint evaluation increased the appeal of the lump-sum option, effectively reviving a price framing that typically performs poorly in separate evaluations. This "revival effect" represents a theoretically novel insight and offers practical implications for fundraising strategy: the overall donation request can achieve a higher compliance rate when a lump-sum option is paired with a monetarily equivalent periodic option.

Currently, charities such as RSPCA (2025) present only recurring (periodic) donation options rather than offering both one-time and recurring choices. Our research suggests that charity managers who do this may lose a portion of potential donors who are willing to make a one-time donation. Future research should emphasise the importance of joint evaluation, as it more closely resembles real-life scenarios where individuals compare options before making decisions. Additionally, future research could examine a broader range of factors including donor personality differences, susceptibility to emotional appeals, and moral emotions. Our results suggest that this default practice may inadvertently reduce the pool of potential one-time donors. By presenting both lump-sum and periodic appeals together, charities may "revive" the lump-sum appeal and thereby increase overall donation compliance.

## **6. Figure:**

Effect of evaluations on donation intentions in Study 3.



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