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Solving Economic Euthanasia by Early Intervention

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Problem Statement

Economic euthanasia of pets is on the rise nationally, especially in income-challenged communities. Over 500,000 pets and their families in the U.S. are impacted when forced to make the care vs. financial resources decision. Animal welfare organizations often face the resulting stream of pets in medical crisis, straining already limited financial resources.

To reduce the burden on rescues, the Waggle Foundation undertook this study to evaluate a financially self-sustaining and easily replicable operating model that utilizes matching-donations at scale. Total funds raised on crowdfunded pet campaigns, we posited, would be significantly increased thereby attracting corporate sponsorships to help even more pets in need at rescue/shelter organizations.

To address this problem statement, we tested two hypotheses:

1. Do matching donations impact the probability that people will raise the full amount of funds they need to provide veterinary care to their companion animal?
2. Does the <u>amount</u> of matching affect the probability that people will raise the full amount of funds sought?

Research Methodology

We randomly assigned a total of 56 Waggle cases to one of four groups. This was done by assigning the first case that was created at the beginning of the study to Group 0 (no matching funds) and then each proceeding case was assigned to the next group (Group 1 – 25% matching funds, Group 2 – 50% matching funds, and Group 3 – 100% matching funds).

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Specifically,

No matching funds	label = 0	n = 31
25% matching funds	label = 1	n = 10
50% matching funds	label = 2	n =11
100% matching funds	label = 3	n = 6
		Total: 58

The data were entered into SPSS and non-parametric tests (Kruskal-Wallis test, Chi Square) were used to analyze the data with statistical significance level accepted at p <.05. We first analyzed the data, using the Kruskal-Wallis test, to ensure that these groups were not different from each other in terms of how much money they sought. We found no significant difference between groups (p = .236) in terms of amount of money they sought. We therefore felt confident in being able to use the data to test our two hypotheses.

To test the hypothesis that matching amounts impact whether people reach their goal amount, due to the small sample size within groups, we used counts to assess what percent of cases met 100% of their goal. For cases with no matching funds, none of them met their goal, compared to when they matched 25% (40% met their goal), matched 50% (72.7% met their goal), or 100% match (83.3% met their goal). This would suggest that increased matching amount helps increase the likelihood of reaching goal desired amount. Further research with a larger sample size is needed to further explore this question.

To test the second hypothesis, using Chi Square, we assessed if the amount of funds raised was different based on matching group (0% matching, 25%, 50%, 100%). We found there was a significant difference between no matching and all other matching groups (p <.000). There was not a significant difference between the different amounts of matching (25% vs 50% and 100%). It should be noted, however, that this small sample size might have impacted our ability to detect a difference in the amount of money raised based on matching level.

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Matching Amount & Goals					
				Total	
		Did not meet 100% of goal	Met 100% of goal		
No matching funds	Count	31	0	31	
	Percent	100.0%	0.0%	100.0%	
25%	Count	6	4	10	
	Percent	60.0%	40.0%	100.0%	
50%	Count	3	8	11	
	Percent	27.3%	72.7%	100.0%	
100%	Count	1	5	6	
	Percent	16.7%	83.3%	100.0%	
Total	Count	41	17	58	

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Conclusion

Our study suggests that matching funds positively impact both the amount of money raised <u>and</u> the probability of reaching 100% of pet owners' financial needs. These incentives are observed to have a multiplier effect on initial funds raised by motivating members of the community to become active co-contributors.

Future Research

We anticipate that our model – when employed across geographic regions - would significantly reduce the out-of-pocket expenses for rescues/shelters on a national scale. A larger data set would allow us to determine the *optimal* percentage match. This could have significant impact on various types of animal welfare organizations possessing limited financial assets.

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Authors

Lori Kogan, Ph.D.

Lori is a Professor of Clinical Sciences for the College of Veterinary Medicine and Biomedical Sciences at Colorado State University and a licensed psychologist. She is the editor of the Human-Animal Interaction Bulletin, an open-access, online publication supported by Division 17 (Counseling Psychology) of the American Psychological Association. She is also the founder/director of Pets Forever, a non-profit program and service learning course designed to help low income elderly and disabled pet owners. In addition, Dr. Kogan has years of experience providing individual and couples counseling to veterinary students, faculty and staff. She has published numerous journal articles and book chapters, co-edited the books 'Men and Their Dogs: A New Understanding of Man's Best Friend', and 'Clinician's Guide to Treating Companion Animal Issues: Addressing Human-Animal Interaction' and given invited presentations on topics related to human animal interactions in both psychology and veterinary medicine venues. She is currently engaged in several research projects pertaining to the intersection of the human animal bond and veterinary medicine.

Steven Mornelli

Steve has 25 years of technology and business development experience across diverse industries with a special focus on financial services firms. Before founding the Waggle Foundation, he was the Head of Data Science & Analytics for North America at Capgemini in New York. Previously, he was an SVP at Brown Brothers Harriman in London where he translated complex macroeconomic research on US financial markets. He started his career on Wall St. as a VP at Sanford C. Bernstein, where he specialized in global quantitative research for asset managers and hedge funds.

He is active in the data science community, having founded the Data Skeptics which presents prominent academic and industry thought-leaders focusing on the mathematical, modeling and ethical aspects of big data from an alternative perspective.

Steve holds an MBA in Finance from the University of Michigan, a Master of Engineering Science & Mechanics from Virginia Polytechnic and a BS in Mechanical Engineering from Rensselaer Polytechnic Institute.