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How Close to Home Does Charity Begin?

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ABSTRACT

This paper uses a field experiment to analyse the extent to which people are more inclined to support a charity focused on people or causes in their own region, compared to regions in other parts of the country. New Zealand land owners were incentivised to take part in an online survey by being told they could choose a charity from a list of four that would receive a \$10 donation if they completed the survey. Importantly, the charities are based in different regions of the country. We find evidence of a significant declining radius of altruism: not only do people prefer to support charities in their own area, the further away a charity is located the less likely people are to support it.

JEL Classification: D64; C93

Keywords: charitable giving, declining radius of altruism, field experiment

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1. Introduction

The majority of people living in developed countries prefer to donate to charities with a domestic focus (e.g. helping families in need in their own country) rather than to charities with an international focus (e.g. those helping families in need in developing countries overseas). This finding is evident in observational, survey and experimental data (e.g. Knowles and Sullivan, 2017; Casale and Baumann, 2015; Micklewright and Schnepf, 2009; Giving USA, 2017), implying a declining radius of altruism. In this paper, we analyse whether this declining radius of altruism also applies within countries; that is, are domestic charities given equal preference or do people prefer to give to local charities (i.e. those in their region) rather than charities based elsewhere in the country? If the latter, how quickly does the radius of altruism decline?

We conduct a field experiment in which New Zealand rural landowners taking part in a biannual survey are asked to select a charity, from a list of four, to which a \$10 donation will be made to thank them for completing the survey. Two of these charities are based in the Otago region in the South Island of New Zealand, and two are based in the Bay of Plenty region in the North Island of New Zealand. Rural landowners are a convenient sample on which to test our hypotheses, as being tied to the land they are less mobile than other groups. For groups that do tend to move around a lot, defining what they consider to be their home region would be problematic. We find that there is a significant declining radius of altruism for our sample. Not only do people prefer to donate to charities based in their own region, they have a strong preference to support people in neighbouring regions, rather than regions further away.

The remainder of the paper is structured as follows. Section 2 of the paper reviews the existing literature that has analysed whether there is a declining radius of altruism with respect to charitable giving. Section 3 provides details of our experimental design. The results are presented and discussed in Section 4, with Section 5 concluding.

2. Literature Review

Evidence from observational and survey data show that most people living in developed countries are more likely to donate to domestic causes than to international causes (e.g. international development charities helping people in need in poor countries overseas). For

example, in the US only 5.7% of personal donations go to international development charities (Giving USA Foundation, 2017), with Casale and Baumann's (2015) survey data showing only 7.2% of US households had donated to international development in the previous year. In New Zealand, the country where we conduct our field experiment, 8.7% of private donations go to international development (Cox et al., 2015). The share going to international development is higher in the UK, ranging from 20% to 40% for the period 1978 to 2004 (Atkinson et al., 2012). However, Micklewright and Schnepf (2009) find that five times as many people report having donated to a domestic charity than to an international development charity in their UK survey. Rajan et al.'s (2009) survey data for Canada show that 6.4% of Canadians donated both to international development and to domestic causes, with 81.3% giving to domestic causes only. Weipking (2010), using survey data from the Netherlands, controls for other charity characteristics (e.g. whether the charity is faith based or whether it focuses on helping children) as well as whether it is international in focus. She finds charities with an international focus, all else equal, receive more than charities with a local focus; the size of this effect is comparable to half the positive effect of having a focus on the environment or animals. Therefore, all else equal, international charities receive more donations, but local charities with a certain focus (e.g. the environment) could receive more than an international development charity.

One possible reason why charities with an overseas focus receive a low share of private donations could be what Knowles and Sullivan (2017) term the number of charities effect. They control for this by conducting a field experiment where participants are asked whether the researchers should donate \$10 to World Vision (a charity assisting families in need in developing countries) or the Salvation Army (a charity helping families in need in the home country). After controlling for this number of charities effect they found 72% of participants chose the domestic charity. By contrast, Jones (2017) conducts a dictator game laboratory experiment inviting Australian university students to donate to a charity helping people in need. Participants could choose between donating to needy indigenous Australians, needy non-indigenous Australians or needy people overseas. Approximately half chose to give to needy people overseas. Schons et al. (2017) conduct a field experiment where participants can choose to donate to a domestic charity, an overseas charity, or to split their donation 50:50 between the two. The majority of participants chose to divide the money between the two charities.

Genç, Knowles and Sullivan (2019) conduct a discrete choice experiment to analyse when people are choosing a charity to donate to, what weight people place on the following three attributes: (i) the effectiveness of a donation, (ii) the need of recipients and (iii) whether the donation will be spent at home or overseas. For nearly half the participants, where the donation is spent was the most important attribute, with participants preferring the money be spent in their own country, consistent with there being a declining radius of altruism.

The studies reviewed so far analyse whether people prefer to donate to charities with a domestic rather than international focus. One study which analyses whether people prefer to donate to local charities, rather than charities based in other parts of the same country, is Herzenstein and Posavac (2019).⁴ The main focus of their paper, which evaluates six separate studies, is on whether people prefer to give to domestic rather than foreign charities. They find evidence that most people do, and that this effect is more pronounced when people are primed to think their personal financial resources are scarce. This finding is in line with the idea that from an evolutionary perspective, when people are under threat, they are more likely to favour their in-group at the expense of the out-group (Navarrete et al., 2007). In one of their studies, a sample of 105 undergraduates at an East Coast university in the US were asked to vote on whether the researchers should donate money to an environmental group working on the East Coast or West Coast of the US. There was a slight preference for the East Coast charity, which received 61 percent of the money. Our research differs from Herzenstein and Posavac in that we conduct a field experiment with farmers, rather than a laboratory experiment with university students. More importantly, we analyse how the radius of altruism declines in greater detail: we assess to what extent a charity is likely to be supported by people from the same region compared to neighbouring regions and regions at the other end of the country.

To summarise the existing literature, most studies find that most people have a preference for donating to charities helping people or causes in their own country, rather than overseas, but not all studies find this. The one study on whether such locational preference exists within a country (Herzenstein and Posavac, 2019) compares only whether people on the East Coast of

⁴ In addition, Gallier et al. (2017) find, in a multi-level public goods game, that people contribute more to the public good when the other members of the group are from their local neighbourhood, rather than a different neighbourhood in the same region. This provides evidence of parochialism in the context of the provision of public goods, but the paper is not about charitable giving.

the US would prefer to give to an East Coast or West Coast charity, whereas we analyse whether people from 14 different regions of New Zealand are more inclined to give to an Otago or Bay of Plenty based charity. This enables us to analyse in more detail how the radius of altruism diminishes the further away people live from where a charity is based.

3. Experimental Design

Our field experiment was incorporated into the Survey of Rural Decision Makers, a large-scale, web-based survey of land owners across New Zealand. Conducted biannually since 2013, the Survey of Rural Decision Makers provides detailed information on land use, land-use change, and drivers and barriers of land-management practices (e.g. Brown and Roper 2017). The sample is drawn from official databases of rural land owners and from past participants, and the survey is widely promoted by industry bodies and central and regional government. To accommodate seasonal commitments for farmers in different sectors, the survey was open from 6 September until 7 November 2017. In addition to the initial invitation, each respondent received up to three reminder messages.

The survey has traditionally incentivised participation by both a charitable contribution and a prize draw. For the 2017 survey, a subset of participants were given the option of choosing one of four charities which would receive a \$10 donation, with two of these based in the Otago region in the South Island and two in the Bay of Plenty region in the North Island. For each region, one of the two charities was an environmental charity and the other a farmer welfare charity. The two Otago charities were the Yellow-Eyed Penguin Trust and the Rural Support Trust for flood relief in Otago. The two Bay of Plenty charities were the Kaharoa Kōkako Trust and the Bay of Plenty Rural Support Trust for flood relief. Participants were provided with a brief description of the charity and a link to the charities' web sites. An advantage of incorporating our experiment within an established survey is that although participants knew they were taking part in a research project, they were not aware of the specific hypothesis we were testing.

Figure 1 shows the location of Otago (which is in the South Island) and the Bay of Plenty (which is in the North Island). Although people in New Zealand identify to some extent with the region they live in, and which of the two main islands they live on, rivalry between regions tends to be limited to the sporting arena.

The yellow-eyed penguin and the Kōkako are both endangered birds, with the Yellow-Eyed Penguin and Kōkako trusts being involved in efforts to protect the birds from extinction. The North Island Kōkako is entirely restricted to New Zealand's North Island.⁵ The yellow-eyed penguin breeds only as far north as the Banks Peninsula on New Zealand's South Island. As such, the two species are geographically distinct. Significant flooding had occurred in the both Otago and the Bay of Plenty in the weeks leading up to the survey, with the two Rural Support Trusts raising money for farmers affected by the floods in their local region.

4. Results

Table 1 presents summary statistics on the amount of money donated to each of the four charities. The Yellow-Eyed Penguin Trust was the most popular charity, receiving 48.6% of donations, with the other three charities all receiving a similar share: 19.6% for the Kaharoa Kōkako Trust, 16.1% for the Otago Rural Support Trust and 15.7% for the Bay of Plenty Rural Support Trust. Table 1 also shows the distribution of participants from different regions around the country. Participants from the Canterbury region make up 25.4% of responses, which is not surprising as Canterbury is a significant farming region in New Zealand.

Table 2 provides information on the demographic composition of the sample. The mean age is 59.6 years and 68.4% of participants are male. Participants are, on average, reasonably well educated with 22.5% having a post-graduate degree and 21.7% an undergraduate degree (labelled "BA/BSc in Table 2). On average participants are involved in 1.4 community groups. The last three rows of the table present information on participants' attitudes to environmental issues. The variables summarised in Table 2 are included as control variables in our regression equations reported later in this section.

Of most interest is the extent to which participants chose a charity nearest to where they live. Figure 1 depicts the share of survey respondents in each region who donated to one of the two Otago-based charities (the Yellow-Eyed Penguin Trust and the Rural Support Trust for flood relief in Otago). Notably, 96.7% of Otago-based respondents selected one of these two charities. Survey respondents in neighbouring regions also favoured the two Otago-based

⁵ A related species, the South Island kōkako, was declared extinct by the Department of Conservation in 1967, although unconfirmed sightings have been reported since.

charities, with 100% of respondents in Southland, 90.1% of respondents in Canterbury, and 62.5% of respondents in the West Coast doing so. Residents in the two remaining regions of the South Island also disproportionately earmarked charitable contributions to the two Otago-based charities. Respondents from the North Island (particularly those in the Bay of Plenty, neighbouring Gisborne, and Auckland) disproportionately favoured the two Bay of Plenty-based charities (the Rural Support Trust's flood relief in the Bay of Plenty and the Kaharoa Kōkako Trust). These results suggest strong proximity-based preferences in charitable giving, with participants most inclined to support the charity closest to where they live.

More formally, we use a logit framework to evaluate possible preferences in charitable giving. In particular, we regress an indicator variable for whether or not a survey respondent chooses one of the two Otago-based charities (and, analogously, one of the two Bay of Plenty-based charities) on a categorical variable that describes each respondent's residence. Specifically, our location measure accounts for respondents who live in the same region in which the charity is based, those who live in regions that border the region in which the charity is based, those who live elsewhere on the same island on which the charity is based, and those who live on the other island.⁶ Standard errors are clustered at the regional level to account for potential heteroskedasticity in preferences by location, and point estimates are converted to odds ratios to facilitate interpretation.

The odds of earmarking a donation to an Otago-based charity among Otago residents are 51.6 times those of North Island residents (Table 3, column 1, $p < 0.01$). Similarly, the odds of earmarking a donation to a Bay of Plenty charity among Bay of Plenty residents are 18.9 times those of South Island residents (Table 3, column 4, $p < 0.01$). These results indicate strong locational preferences in charitable giving among residents who live in the same region in which a charity is based. Moreover, this effect persists to neighbouring regions and other regions on the same island. For example, the odds of Canterbury, West Coast, and Southland residents earmarking a donation to an Otago-based charity are 14.1 times those for a North Island resident ($p < 0.01$), and the odds of a respondent residing elsewhere on the South Island earmarking a donation to an Otago-based charity are 3.8 times those of a North Island resident ($p < 0.01$). Similarly, the odds of a Waikato, Gisborne, and Hawke's Bay

⁶ For the purposes of this analysis, respondents living on Waiheke, Great Barrier, Kawau, and Motiti Island are categorized as being "North Island". Those living on Matakana, Arapaoa, and Stewart Island are listed as being "South Island".

resident earmarking a donation for a Bay of Plenty-based charity are 9.5 times those of a South Island resident ($p < 0.01$), and the odds of a respondent residing elsewhere on the North Island earmarking a donation to a Bay of Plenty-based charity are 8.9 times those of a South Island resident ($p < 0.01$).

These findings of location-based preferences in charitable giving (i.e. a declining radius of altruism) are robust to the inclusion of demographic characteristics such as age, sex, and education (columns 2 and 5)⁷, and including these factors has only a modest impact on the estimated odds ratio. Moreover, the effects of demographic factors are without exception indistinguishable from 1.0, indicating that location (and not demographics) drive overall preferences in charitable giving.

To reduce potential concerns about omitted variable bias, we further control for community involvement (as measured by the number of different types of organisations in which survey respondents participate) and attitudes regarding protection of natural habitat on public land, protection of natural habitat on private land, and the right to access waterways for recreational purposes (columns 3 and 6). The odds of donating to a Bay of Plenty-based charity are lower for those with preferences for access to waterways for recreation uses ($p < 0.10$). Moreover, with the inclusion of these additional controls, the odds of donating to a Bay of Plenty-based charity are higher for respondents with certificates or diplomas (i.e. a tertiary undergraduate qualification) vis-à-vis those with secondary education or less ($p < 0.05$). Again, however, the statistical significance of each of the location variables is similar with the inclusion of the additional regressors, underscoring the strong effect of proximity on preferences for charitable giving.

It is conceivable that charismatic birds associated with each island (i.e. the North Island kōkako for residents of the North Island and the yellow-eyed penguin for residents of the South Island) underlie apparent locational preferences. To test this hypothesis, we restrict the sample to 89 survey respondents who earmarked charitable donations to the Rural Support Trust's flood relief efforts in either Otago or the Bay of Plenty. Figure 2 depicts the share of respondents in each region who donated to the Otago Rural Support Trust. It is clear from

⁷ 36 survey respondents opted not to provide demographic details, hence the sample sizes for this and the subsequent regression are smaller.

Figure 2 that respondents from the South Island are much more likely to choose the Otago Rural Support Trust than are respondents from the North Island.

Regression equation results for this sample of 89 respondents are reported in Table 4. As above, standard errors are clustered at the regional level to account for potential heteroskedasticity in preferences by location and point estimates are converted to odds ratios to facilitate interpretation.

The odds of earmarking a donation to flood relief in Otago among Otago residents are 108.0 times those of North Island residents (Table 4, column 1, $p < 0.01$). Analogously, *all* of the survey respondents who reside in the Bay of Plenty and who earmarked charitable donations to flood relief specified flood relief in the Bay of Plenty (column 4).⁸ Residents of neighbouring regions and others on the same island in which the charity operates show similar locational preferences. For example, the odds of earmarking charitable donations to flood relief in Otago are 60.0 times higher among survey respondents who reside in regions that border Otago and 52.0 times higher among survey respondents from elsewhere on the South Island than among survey respondents on the North Island, respectively (both $p < 0.01$). Similarly, the odds of earmarking charitable donations to flood relief in the Bay of Plenty are 57.8 times higher among survey respondents who reside in regions that border the Bay of Plenty and 52.5 times higher among survey respondents from elsewhere on the North Island than among survey respondents on the South Island, respectively (both $p < 0.01$).

Unlike results that include all four charities, odds ratios on location variables increase as demographic controls are included (columns 2 and 5) when restricting the sample to respondents who selected the Rural Support Trust. For example, the odds of an Otago resident selecting flood relief in Otago are 222.4 times those of a North Island resident ($p < 0.01$) while the odds of a resident of a neighbouring region selecting flood relief in Otago is 291.2 times those of a North Island resident ($p < 0.01$). For flood relief in the Bay of Plenty, the increase in odds is especially pronounced for both residents of neighbouring regions and other North Island residents. In addition, the odds that male respondents earmark charitable donations for flood relief in the Otago are 5.8 times those of female respondents. These patterns persist (and indeed strengthen) when also controlling for community involvement

⁸ As such, odds ratios cannot be calculated.

and attitudes toward habitat protection and freshwater access, none of which affects the choice of charity for flood relief. Again, the findings present strong evidence for the dominant role of proximity in charitable giving, although we are cognizant that the high odds ratios likely reflect the small sample sizes.

For completeness, we also restrict the sample to the 191 survey respondents who earmarked their donations to one of the two conservation charities, the Yellow-Eyed Penguin Trust and the Kaharoa Kōkako Trust. Figure 3 depicts the share of respondents in each region who chose to support the Yellow-Eyed Penguin Trust and shows that those living closer to Otago are more likely to support the Yellow-Eyed Penguin Trust than are those living further away. Odds ratios from regression equations are reported in Table 5, using the same modelling assumptions as above.

Every Otago-based respondent who earmarked charitable donations to a conservation charity selected the Yellow-Eyed Penguin Trust (column 1). The odds of earmarking a donation to the Bay of Plenty-based Kaharoa Kōkako Trust among Bay of Plenty residents are 5.4 times those of South Island Residents (column 4, $p < 0.01$). The odds of earmarking donations to the nearest conservation charity are similarly high for survey respondents who reside in regions that border the charity's home location than on the other island ($p < 0.01$). In addition, the odds of North Island residents selecting the Kaharoa Kōkako Trust are 5.2 times those of South Island residents, although the odds of South Islanders who reside outside Otago and neighbouring regions are not statistically higher than those of North Island residents, a further indication of the prominence of the Yellow-Eyed Penguin Trust among conservation charities. Including demographics (columns 2 and 5) and controlling for community involvement does not diminish the overriding role of proximity in charitable giving. That said, the odds that respondents with certificates or diploma earmark donations to the Kaharoa Kōkako Trust (Yellow-Eyed Penguin Trust) are statistically higher (lower) than those with secondary education or less ($p < 0.10$), and the odds of donating to an Otago-based charity are higher for those with preferences for access to waterways for recreation uses ($p < 0.05$).

All three sets of results are replicated in the Appendix (Tables 1A – 3A), replacing locational dummies with the log of the Euclidean distance from the centre of each respondent's

territorial authority⁹ to Rotorua, where the Kaharoa Kōkako Trust is based, (for Otago-based charities) or Dunedin, where the Yellow-Eyed Penguin Trust is based, (for Bay of Plenty-based charities). Greater distances to the non-local charities are associated with greater odds of donating to the local charity, with and without additional controls ($p < 0.01$ in all 16 of 18 cases and $p < 0.05$ in the remaining two cases), bolstering evidence that location is the principle criterion in charitable giving.

5. Summary and Conclusion

The aim of this paper was to test whether there is a declining radius of altruism for charitable giving within a country. Herzenstein and Posavac (2019) have shown that students taking part in a laboratory experiment on the East Coast of the US are more likely to support an East Coast charity than a West Coast charity. We add to this literature by analysing to what extent people's preference for supporting a charity in a particular region diminishes, the further away from that region they live, in the context of a field experiment. Our results show there is a significant locational bias. Not only do people prefer to donate to charities in their own area, the further away a charity is the less likely they are to support it. For example, people living in Otago are 50 times more likely to choose the Otago-based charity than are North Island based residents. Further, those living in regions bordering Otago are 14 times more likely to choose the Otago charity than are North Island based residents and those living elsewhere in the South Island are three times as likely as a North Island resident to support the Otago based charity. In summary, there is a very strong declining radius of altruism with respect to charitable giving, that is not limited to simply supporting charities from one's own region.

These results have interesting policy implications. Charities with a local focus should be aware they are not likely to receive many donations from people located far away in other parts of the country. Also, charities with a national focus may find they raise more money if they can offer guarantees that money raised locally will be spent locally.

⁹ A territorial authority is an administrative unit below that of the region.

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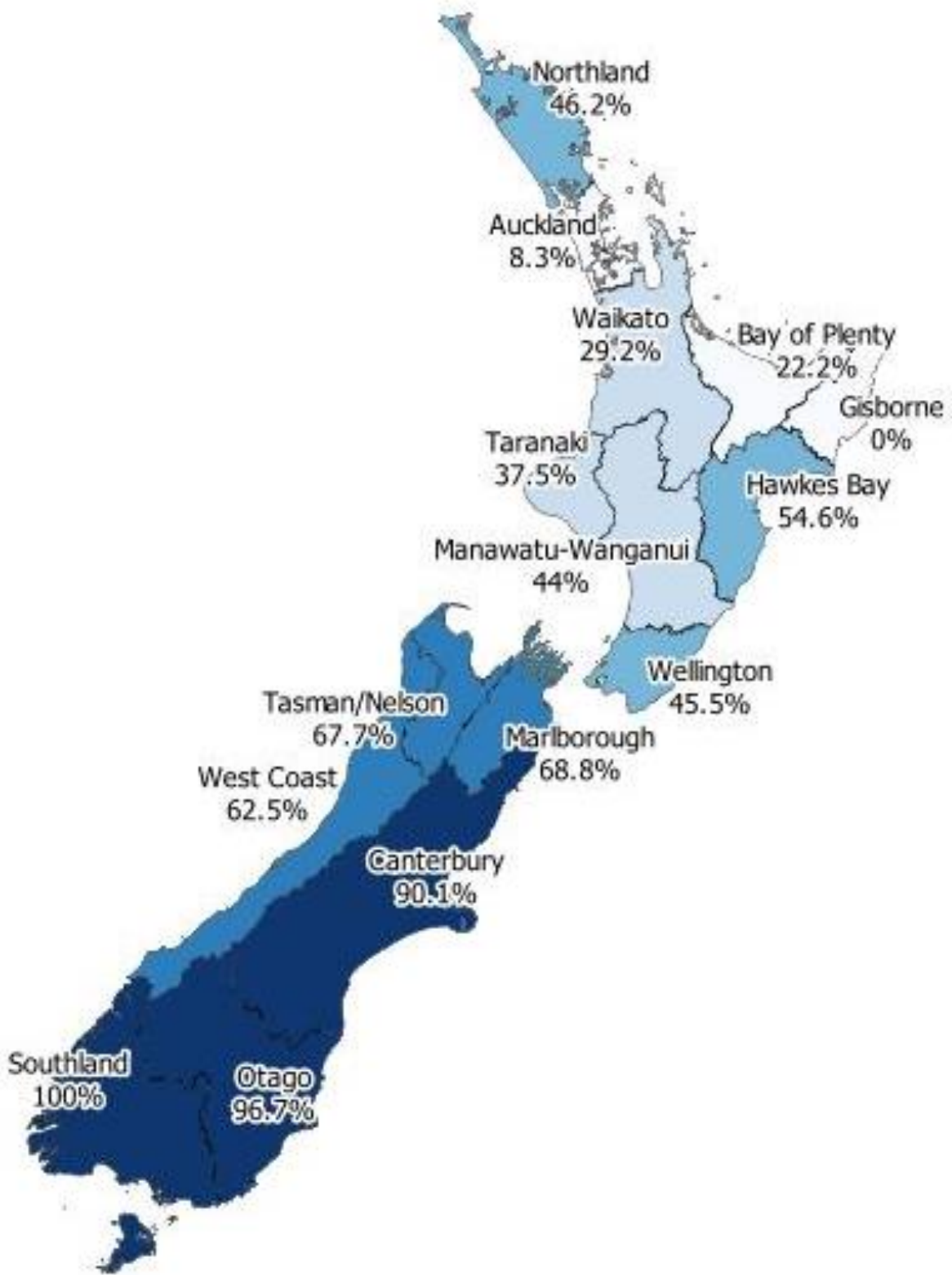


Figure 1. Proportion of charitable donations earmarked to Otago-based charities, by region

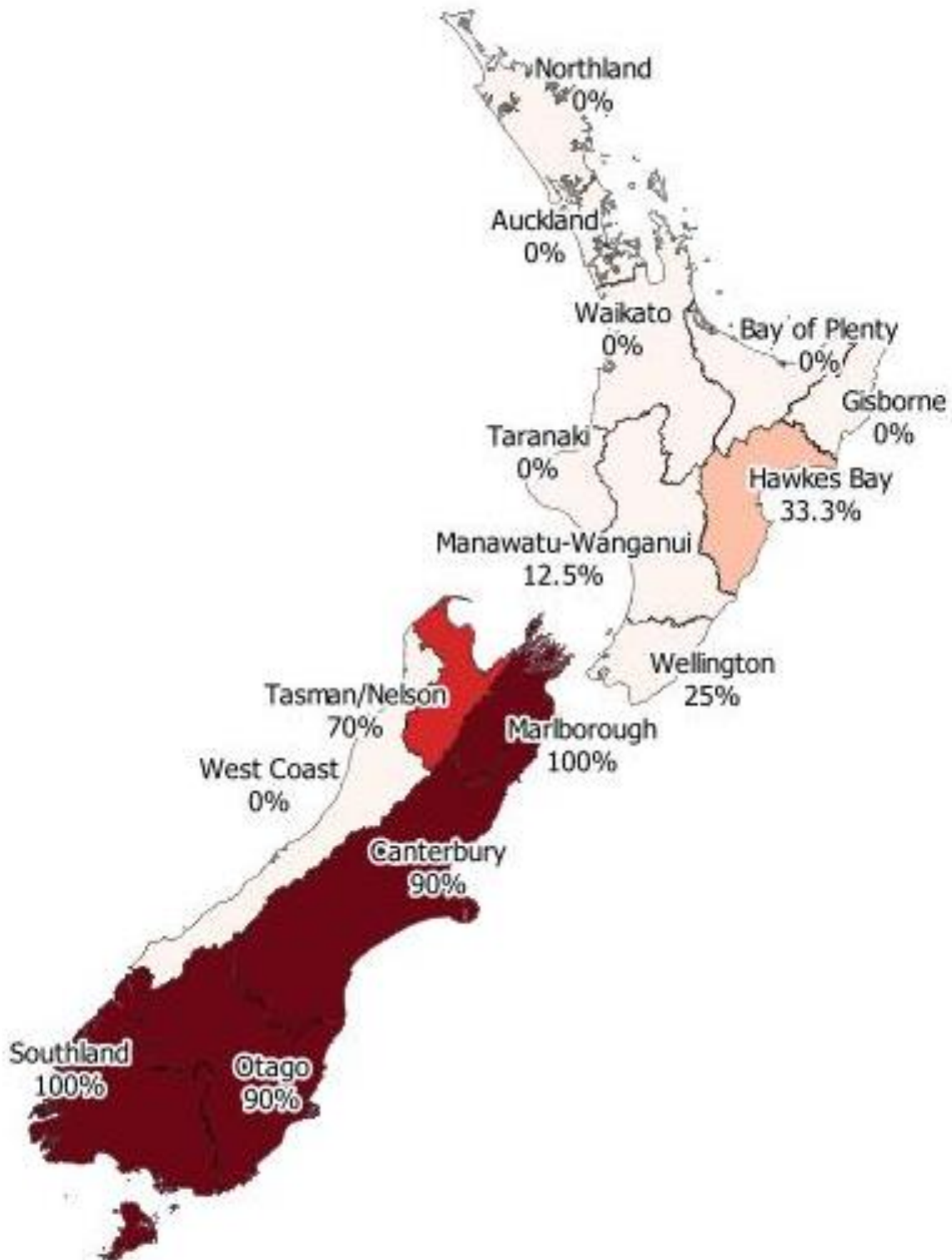


Figure 2. Proportion of charitable donations to flood-relief charities earmarked to Otago-based charities, by region



Figure 3. Proportion of charitable donations to environmental charities earmarked to Otago-based charities, by region

Table 1. Summary statistics – Charities earmarked for donations and respondent residence

CHARITY	n	percent
Kaharoa Kōkako Trust	55	19.6%
Rural Support Trust - Bay of Plenty	44	15.7%
Rural Support Trust - Otago	45	16.1%
Yellow-Eyed Penguin Trust	136	48.6%

RESPONDENT RESIDENCE	n	percent
Northland	13	4.6%
Auckland	12	4.3%
Waikato	24	8.6%
Bay of Plenty	9	3.2%
Gisborne	1	0.4%
Hawke's Bay	11	3.9%
Taranaki	8	2.9%
Manawatu-Wanganui	25	8.9%
Wellington	11	3.9%
Tasman/Nelson	31	11.1%
Marlborough	16	5.7%
West Coast	8	2.9%
Canterbury	71	25.4%
Otago	30	10.7%

Table 2. Summary statistics – Demographics, community involvement, and attitudes

VARIABLES	unit	mean	std dev
Age	years	59.6	9.6
Male	%	68.4	
Education: Certificate / Diploma	%	29.9	
Education: BA/BSc	%	21.7	
Education: Post-graduate	%	22.5	
Involvement: Community organisations ¹	n	1.4	1.4
Attitudes: Public habitat ²	0-10 scale ⁵	8.5	1.7
Attitudes: Private habitat ³	0-10 scale ⁵	7.6	2.2
Attitudes: Water access ⁴	0-10 scale ⁵	8.5	1.6

- 1 Involvement is measured as the number of different types of organisations in which each respondent is involved. Specific types of community organisations include farm organisations, schools, religious organisations, religious organisations, the Returned Servicemen’s Association, arts clubs, cultural clubs, sports clubs, special interest clubs, conservation organisations, service clubs, volunteer organisations, political groups, and regional councils.
- 2 Attitudes toward public habitat conservation is measured as the extent to which survey respondents agree with the following statement: “I personally believe that the Department of Conservation should protect habitat for native plants and animals on public land”.
- 3 Attitudes toward private habitat conservation is measured as the extent to which survey respondents agree with the following statement: “I personally believe that the Department of Conservation should protect habitat for native plants and animals on private land”.
- 4 Attitudes toward water access is measured as the extent to which survey respondents agree with the following statement: “I personally believe that it is important to maintain the recreational use of waterways for activities such as fishing and swimming”.
- 5 Attitudinal questions are measured on a 0-10 scale in which 0 indicates “strongly disagree” and 10 indicates “strongly agree”.

Table 3. Determinants of giving to an Otago-based charity (columns 1-3) and a Bay of Plenty-based charity (columns 4-6)

VARIABLES	(1) Otago charity Odds ratios	(2) Otago charity Odds ratios	(3) Otago charity Odds ratios	(4) Bay of Plenty charity Odds ratios	(5) Bay of Plenty charity Odds ratios	(6) Bay of Plenty charity Odds ratios
Location:	51.63***	43.77***	51.50***	18.85***	19.99***	21.48***
Same region	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Location:	14.07***	27.05***	29.02***	9.527***	11.30***	12.04***
Bordering region	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Location:	3.798***	3.509***	3.518***	8.905***	10.69***	11.11***
Same island	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age		0.998	0.997		1.004	1.004
		(0.937)	(0.900)		(0.833)	(0.828)
Male		1.088	1.057		1.046	1.066
		(0.838)	(0.902)		(0.906)	(0.880)
Education:		0.627	0.541**		1.823	2.058**
Certificate / Diploma		(0.147)	(0.025)		(0.122)	(0.035)
Education:		0.824	0.851		1.467	1.416
BA / BSc		(0.611)	(0.689)		(0.341)	(0.395)
Education:		0.925	0.901		1.358	1.330
Post-graduate		(0.811)	(0.742)		(0.464)	(0.465)
Involvement:			0.931			1.096
Community orgs			(0.666)			(0.565)

Attitudes:			1.145			0.941
Public habitat			(0.261)			(0.599)
Attitudes:			0.888			1.123
Private habitat			(0.224)			(0.211)
Attitudes:			1.193			0.836*
Water access			(0.114)			(0.090)
Constant	0.562***	0.665	0.137	0.186***	0.0897**	0.234
	(0.004)	(0.733)	(0.117)	(0.000)	(0.031)	(0.266)
Observations	280	241	241	280	241	241
Pseudo R ²	0.233	0.277	0.293	0.197	0.224	0.238

p-values clustered by region in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Table 4. Determinants of giving to the Otago-based Rural Support Trust (columns 1-3) and the Bay of Plenty-based Rural Support Trust (columns 4-6), among survey respondents who earmarked donations to flood relief

	(1) RST flooding Otago	(2) RST flooding Otago	(3) RST flooding Otago	(4) RST flooding Bay of Plenty	(4) RST flooding Bay of Plenty	(5) RST flooding Bay of Plenty
VARIABLES	Odds ratios	Odds ratios	Odds ratios	Odds ratios	Odds ratios	Odds ratios
Location:	108.0***	222.4***	501.2***	∞	∞	∞
Same region	(0.000)	(0.000)	(0.000)			
Location:	60.00***	291.2***	886.6***	57.75***	86.42**	300.6***
Bordering region	(0.000)	(0.000)	(0.000)	(0.002)	(0.025)	(0.002)
Location:	52.00***	53.73***	210.1***	52.50***	130.8***	461.4***
Same island	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Age		0.936 (0.155)	0.945 (0.189)		1.051 (0.185)	1.037 (0.275)
Male		5.830*** (0.008)	4.556* (0.093)		0.196*** (0.009)	0.224* (0.071)
Education:		0.991 (0.994)	0.975 (0.982)		1.669 (0.649)	1.459 (0.736)
Certificate / Diploma		3.057 (0.301)	5.118 (0.262)		0.490 (0.558)	0.239 (0.338)
Education:		0.309 (0.540)	0.876 (0.934)		2.620 (0.489)	0.995 (0.997)
BA / BSc						
Education:						
Post-graduate						

Involvement:			0.582			1.676
Community orgs			(0.128)			(0.100)
Attitudes:			1.234			0.792
Public habitat			(0.615)			(0.465)
Attitudes:			0.596**			1.767**
Private habitat			(0.042)			(0.036)
Attitudes:			1.278			0.841
Water access			(0.468)			(0.547)
Constant	0.0833***	0.832	0.391	0.190***	0.0157	0.00709
	(0.000)	(0.943)	(0.770)	(0.000)	(0.195)	(0.244)
Observations	89	76	76	84	71	71
Pseudo R ²	0.475	0.569	0.623	0.446	0.523	0.586

p-values clustered by region in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. ∞ indicates that all Bay of Plenty residents who earmarked charitable donations to flood relief selected flood relief in the Bay of Plenty (the number of observations has been adjusted accordingly).

Table 5. Determinants of giving to the Otago-based Yellow-Eyed Penguin Trust (columns 1-3) and the Bay of Plenty-based Kohara Kōkako Trust (columns 4-6), among survey respondents who earmarked donations to environmental charities

	(1) YE Penguin Otago charity Odds ratios	(2) YE Penguin Otago charity Odds ratios	(3) YE Penguin Otago charity Odds ratios	(4) Kōkako BOP charity Odds ratios	(5) Kōkako BOP charity Odds ratios	(6) Kōkako BOP charity Odds ratios
Location:	∞	∞	∞	5.444***	5.505***	5.461***
Same region				(0.000)	(0.002)	(0.003)
Location:	9.575***	19.56***	18.89***	5.444***	6.543***	6.219***
Bordering region	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
Location:	1.542	1.519	1.397	5.218***	6.250***	5.673***
Same island	(0.115)	(0.325)	(0.477)	(0.001)	(0.002)	(0.003)
Age		1.010 (0.730)	1.012 (0.673)		1.001 (0.975)	0.999 (0.967)
Male		0.583 (0.154)	0.618 (0.300)		1.994* (0.055)	1.949 (0.122)
Education:		0.376* (0.062)	0.308** (0.034)		2.622* (0.078)	3.045* (0.053)
Certificate / Diploma		0.546 (0.279)	0.503 (0.262)		2.262 (0.161)	2.446 (0.117)
Education:		0.745 (0.644)	0.660 (0.505)		1.952 (0.329)	2.101 (0.263)
BA / BSc						
Education:						
Post-graduate						

Involvement:			0.996			1.028
Community orgs			(0.986)			(0.902)
Attitudes:			0.967			1.139
Public habitat			(0.816)			(0.375)
Attitudes:			0.958			1.026
Private habitat			(0.628)			(0.741)
Attitudes:			1.269**			0.794***
Water access			(0.014)			(0.006)
Constant	1.027	1.243	0.299	0.184***	0.0501*	0.0991
	(0.865)	(0.908)	(0.443)	(0.000)	(0.071)	(0.181)
Observations	171	148	148	191	165	165
Pseudo R ²	0.137	0.207	0.225	0.110	0.161	0.178

p-values clustered by region in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. ∞ indicates that all Otago residents who earmarked charitable donations to a conservation charity selected the Yellow-Eyed Penguin Trust (the number of observations has been adjusted accordingly).

Appendix

Table 1A. Determinants of giving to an Otago-based charity (columns 1-3) and a Bay of Plenty-based charity (columns 4-6) using log distance

VARIABLES	(1) Otago charity Odds ratios	(2) Otago charity Odds ratios	(3) Otago charity Odds ratios	(4) Bay of Plenty charity Odds ratios	(5) Bay of Plenty charity Odds ratios	(6) Bay of Plenty charity Odds ratios
Distance to Rotorua	4.411*** (0.000)	4.933*** (0.000)	5.189*** (0.000)			
Distance to Dunedin				9.790*** (0.000)	14.47*** (0.000)	15.06*** (0.000)
Age		0.997 (0.884)	0.997 (0.877)		0.994 (0.797)	0.994 (0.788)
Male		1.004 (0.992)	0.986 (0.972)		0.916 (0.831)	0.942 (0.895)
Education: Certificate / Diploma		0.747 (0.443)	0.666 (0.234)		1.406 (0.344)	1.581 (0.184)
Education: BA / BSc		0.789 (0.544)	0.824 (0.645)		0.953 (0.907)	0.912 (0.837)
Education: Post-graduate		0.978 (0.953)	0.984 (0.965)		0.954 (0.888)	0.989 (0.974)
Involvement: Community orgs			0.881 (0.388)			1.083 (0.631)
Attitudes:			1.065			0.907

Public habitat			(0.625)			(0.401)
Attitudes:			0.911			1.080
Private habitat			(0.391)			(0.429)
Attitudes:			1.218**			0.831*
Water access			(0.040)			(0.081)
Constant	0.000306***	0.000220***	4.53e-05***	3.17e-07***	3.52e-08***	1.43e-07***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	280	241	241	280	241	241
Pseudo R ²	0.214	0.240	0.257	0.240	0.286	0.300

p-values clustered by region in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Table 2A. Determinants of giving to the Otago-based Rural Support Trust (columns 1-3) and the Bay of Plenty-based Rural Support Trust (columns 4-6), among survey respondents who earmarked donations to flood relief using log distance

VARIABLES	(1) Otago charity Odds ratios	(2) Otago charity Odds ratios	(3) Otago charity Odds ratios	(4) Bay of Plenty charity Odds ratios	(5) Bay of Plenty charity Odds ratios	(6) Bay of Plenty charity Odds ratios
Distance to Rotorua	20.26*** (0.000)	65.02** (0.015)	183.1** (0.014)			
Distance to Dunedin				30.13*** (0.001)	116.2*** (0.004)	207.1*** (0.004)
Age		0.952 (0.203)	0.953 (0.413)		1.039 (0.205)	1.040 (0.273)
Male		5.903*** (0.007)	5.997** (0.044)		0.203** (0.029)	0.224* (0.089)
Education: Certificate / Diploma		1.658 (0.580)	2.371 (0.405)		0.386 (0.254)	0.337 (0.197)
Education: BA / BSc		6.026 (0.101)	15.30* (0.082)		0.178* (0.058)	0.129* (0.077)
Education: Post-graduate		0.563 (0.799)	1.382 (0.885)		2.569 (0.657)	1.707 (0.776)
Involvement: Community orgs			0.582 (0.115)			1.373 (0.238)
Attitudes:			1.181			0.843

Public habitat			(0.624)			(0.659)
Attitudes:			0.687**			1.226
Private habitat			(0.045)			(0.351)
Attitudes:			1.346			0.827
Water access			(0.206)			(0.460)
Constant	1.68e-08***	5.15e-11***	0***	5.29e-10***	0**	0**
	(0.000)	(0.006)	(0.008)	(0.001)	(0.014)	(0.018)
Observations	89	76	76	89	76	76
Pseudo R ²	0.459	0.577	0.625	0.408	0.544	0.567

p-values clustered by region in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Table 3A. Determinants of giving to the Otago-based Yellow-Eyed Penguin Trust (columns 1-3) and the Bay of Plenty-based Kohara Kōkako Trust (columns 4-6), among survey respondents who earmarked donations to environmental charities using log distance

VARIABLES	(1) Otago charity Odds ratios	(2) Otago charity Odds ratios	(3) Otago charity Odds ratios	(4) Bay of Plenty charity Odds ratios	(5) Bay of Plenty charity Odds ratios	(6) Bay of Plenty charity Odds ratios
Distance to Rotorua	2.998*** (0.000)	3.202*** (0.001)	3.106*** (0.001)			
Distance to Dunedin				6.678*** (0.000)	9.584*** (0.000)	9.258*** (0.000)
Age		0.998 (0.942)	1.000 (0.998)		0.988 (0.698)	0.985 (0.625)
Male		0.515* (0.076)	0.522 (0.127)		1.723 (0.173)	1.679 (0.286)
Education: Certificate / Diploma		0.507 (0.263)	0.426 (0.173)		2.381 (0.159)	2.827 (0.105)
Education: BA / BSc		0.411 (0.113)	0.385 (0.111)		1.582 (0.463)	1.675 (0.429)
Education: Post-graduate		0.633 (0.507)	0.585 (0.448)		1.489 (0.579)	1.646 (0.482)
Involvement: Community orgs			0.954 (0.826)			1.039 (0.877)
Attitudes:			0.884			1.101

Public habitat			(0.423)			(0.497)
Attitudes:			0.966			1.023
Private habitat			(0.718)			(0.779)
Attitudes:			1.272***			0.774***
Water access			(0.002)			(0.006)
Constant	0.00391***	0.00834*	0.00510**	2.63e-06***	2.19e-07***	9.09e-07***
	(0.002)	(0.069)	(0.015)	(0.000)	(0.000)	(0.000)
Observations	191	165	165	191	165	165
Pseudo R ²	0.130	0.179	0.198	0.181	0.240	0.259

p-values clustered by region in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$