Appendix A: State Dependence Model Robustness

In this section we report the results of the goodness of fit for different choices of the α in the state-dependence variables. Table A1 shows that the model fit is similar between values of α. The parameter value of 0.70 shows the best goodness of fit among the models. We choose the value of $\alpha = 0.50$ due to its slight performance advantage in the out of sample goodness of fit. $\alpha = 0.70$ scores a log-likelihood of -418 and -267 in out of sample measures for 50% and 75% of memory, which is slightly worse than $\alpha = 0.50$. This suggests that over optimizing on parameters be researches with too many degrees of freedom in the choice of models may lead to over fitting of the model.

α	Log-Likelihood	AIC	BIC
0.2	-891.85	1841.71	2017.60
0.3	-873.58	1805.15	1981.04
0.4	-857.70	1773.40	1949.29
0.5	-845.23	1748.45	1924.35
0.6	-837.53	1733.06	1908.95
0.7	-836.35	1730.70	1906.59
0.8	-843.78	1745.56	1921.45

Table A1: State Dependence Goodness of Fit. Notes: AIC and BIC denote Akaike Information Criteria and Bayesian Information Criteria respectively. In the above model selection criteria, the smallest represents the preferred model.

Appendix B: Poisson Model to Estimate Expected Catch

The variable expected catch rate is the predicted measure for fish caught per trip per site and is estimated using a Poisson process model. This approach, popularized by McConnell et al. (1995), assumes the number of fish caught to have a Poisson distribution. The explanatory variables that influence fisher behavior are used to predict the expected catch. The variables used in this model include area, workday, a binary indicator for a weekday; weather controls such as wind speed, temperature, and precipitation (inches); fishing hours, used as a proxy for fishing effort; the number of anglers per fisher identity (ID); fishing trip mode; year and month fixed effects.

Variables	Number of Fish Caught as Dependent Variable			
	(1)	(2)	(3)	(4)
Number of Anglers	0.092***	0.079***	0.069***	0.102***
	(0.02)	(0.02)	(0.02)	(0.02)
Fishing Hours	0.209***	-	-	-
	(0.02)	-	-	-
Log(Fishing Hours)	-	1.239***	1.236***	1.204***
	-	(0.06)	(0.06)	(0.07)
Work Day (Yes=1)	-0.020	-0.032	-0.051	-0.011
	(0.06)	(0.05)	(0.06)	(0.06)
Trip mode (i) Party Boat	-0.317	-0.291	-0.330	-0.316
	(0.48)	(0.49)	(0.49)	(0.46)
(ii) Private Boat	-0.291	-0.179	-0.232	-0.089
	(0.44)	(0.45)	(0.46)	(0.43)
(iii) Shore	-1.572***	-1.302***	-1.354***	-1.118***
	(0.43)	(0.45)	(0.46)	(0.43)
(iv) Enhanced Fishing Site	-0.819*	-0.515	-0.580	-0.485
	(0.44)	(0.46)	(0.47)	(0.43)
Weather Controls	Yes	Yes	Yes	Yes
Area Fixed Effects	Yes	Yes	No	Yes
Month and Year Fixed Effects	Yes	Yes	Yes	No
AIC	51068	48833	49804	51792

Table A2: Poisson Model to Estimate Expected Catch

Notes: N = 3,182. Each column represents a new model with varying fixed effects. Model 2 with the relatively better model fit criteria is used to predict the expected catch rate in the multinomial logistic models. Standard errors are given in parentheses. ***, ** and * denotes significance at 1 percent, 5 percent and 10 percent.

Appendix C: Detailed Results of LA Model

The estimated regression coefficients for the LA model are reported in Table A3. The five recorded location choices available to the recreational fishermen are listed column wise in this table, and the sixth is the location category, referred to as 'other', acts as the reference.

The coefficients in the LA model are interpreted as log odds ratios. For instance, the positive significance of the coefficient for variable, expected catch, implies that a unit more level of expected catch would lead to an expected increase in the multinomial log odds by 0.105 relative to the referent site for the first site and 0.229 for the fourth site, holding all other variables constant. The estimates for site congestion are statistically significant and negative for four out of five areas. This elevated negativity represents the decreased individual share indicating a preference for popular fishing sites compared to the referent site. The coefficients for site history when positive implies that fishers are loyal to the previous site visited whereas a negative sign implies a preference for variety. Significance is obtained only for the positive coefficients. The variable 'period' acts as a proxy for individual fishing experience within our sample size. Three out of five areas exhibit a significant and positive log odds for this variable, implying that a more experienced fisher would visit these areas relative to the referent area.

	Variables	Dependant Variable: Fishing Area	
Area 1	Expected Catch Rate	0.105***	(0.02)
	Site Congestion	-5.92***	(0.66)
	Site History (Yes=1)	1.54***	(0.33)
	Period	0.016***	(0.00)
Area 2	Expected Catch Rate	0.007	(0.03)
	Site Congestion	-6.94***	(2.52)
	Site History (Yes=1)	-0.56	(0.51)
	Period	0.015**	(0.01)
Area 3	Expected Catch Rate	0.002	(0.03)
	Site Congestion	0.25	(0.86))
	Site History (Yes=1)	-0.27	(0.68)
	Period	-0.005	(0.01)
Area 4	Expected Catch Rate	0.229***	(0.03)
	Site Congestion	-318.59***	(27.94)
	Site History (Yes=1)	-0.04	(0.79)
	Period	-0.055	(0.04)
Area 5	Expected Catch Rate	0.055***	(0.02)
	Site Congestion	-11.73***	(0.86)
	Site History (Yes=1)	2.87***	(0.32)
	Period	0.032***	(0.00)

Table A3: LA Model Results

Appendix D: Standardizing the Weight Coefficients

Table A4 (Column 1) reports the CBDT weights estimates after standardizing the variables. By standardizing the coefficients, we make the similarity weight estimates comparable across variables. For instance, when comparing the weights, we find that period has a relatively higher score than site congestion implying that fishers weigh recency more than maintaining similar congestion/popularity levels when choosing a fishing site.

	Fishing Area as Dependant Variable	
Variables	(1)	(2)
Expected Catch Rate	0.118	0.001
	(0.10)	(0.00)
Period	623.6***	0.043***
	(96.68)	(0.01)
Site Congestion	9.25***	412.2***
	(1.87)	(84.8)
Site History (Yes=1)	0.98***	8.57***
	(0.20)	(1.74)

Table A4: CBDT with Standardized Weight Coefficients. Notes: Column (1) reports CBDT weights estimates after standardizing the variables and column (2) reports the estimates in the regular model which is the same as Table 5. The parameter estimates for the areas, the sensitivity parameter as well as the model comparison criteria is the same for both models.