

## APPENDIX C:

### SUPPLEMENTAL TABLES FOR CHAPTER 3

**Table C1.** Observed counts of baseline opinions of marine aquaculture and seaweed farming from both surveys. All baseline opinion responses are included from the MA survey (n = 154). SW survey counts do not include participants who had never heard of the sector in question (SW survey working n: marine aquaculture = 621; seaweed farming = 525).

Sector	Baseline opinion (observed counts)			
	Unfavorable	Not sure	Neutral	Favorable
Marine aquaculture (MA survey)	19	15	50	69
Marine aquaculture (SW survey)	74	56	194	297
Seaweed farming (SW survey)	38	41	169	277

**Table C2a-b.** Observed frequencies of baseline opinions of (a) marine aquaculture and (b) seaweed farming when grouped by baseline familiarity. Percentages represent frequency within that familiarity group, and observed counts are provided in parentheses. Responses are from the SW survey only; the MA survey did not ask an analogous question about baseline familiarity. “not sure” and “never heard of it” responses were analyzed separately from the ordinal regression (see tables B8 & 9).

Baseline familiarity	Baseline opinion (observed counts)			
	Unfavorable	Neutral	Favorable	Not sure
<b>a. Marine aquaculture*</b>				
Very familiar	14% (15)	7% (7)	78% (82)	<1% (1)
Somewhat familiar	14% (36)	32% (80)	52% (130)	2% (6)
Heard of it but know little about it	9% (23)	41% (107)	32% (85)	19% (49)
<i>Total count</i>	<i>74</i>	<i>194</i>	<i>297</i>	<i>56</i>
<b>b. Seaweed farming†</b>				
Very familiar	7% (6)	3% (3)	89% (79)	1% (1)
Somewhat familiar	7% (13)	19% (35)	71% (130)	3% (5)
Heard of it but know little about it	8% (19)	52% (131)	27% (68)	14% (35)
<i>Total count</i>	<i>38</i>	<i>169</i>	<i>277</i>	<i>41</i>

\*Marine aquaculture ordinal logistic regression: LR  $\chi^2$  (2) = 31.1, p = <0.0001, n = 621

†Seaweed farming ordinal logistic regression: LR  $\chi^2$  (2) = 105.6, p = <0.0001, n = 525

**Table Ca-b.** Descriptive statistics from ordinal logistic regressions using baseline familiarity as a categorical predictor for baseline opinion of (a) marine aquaculture and (b) seaweed farming. Respondents who were “not sure” of, or “never heard of” the sector in question were analyzed separately (see tables B8 & 9). Responses are from the SW survey only; the MA survey did not ask an analogous question about baseline familiarity.

Response: baseline opinion	coefficient	SE	t-value	p-value	OR	95% CI
a. Marine aquaculture*						
Very familiar	<i>(reference group)</i>					
Somewhat familiar	-1.04	0.28	-4.05	<0.0001	0.33	0.19 – 0.56
Heard of it but know little about it	-1.43	0.27	-5.23	<0.0001	0.24	0.14 – 0.40
b. Seaweed farming†						
Very familiar	<i>(reference group)</i>					
Somewhat familiar	-1.17	0.39	-2.98	<0.0001	0.31	0.14 – 0.64
Heard of it but know little about it	-2.73	0.38	-7.22	<0.0001	0.07	0.03 – 0.13

\*Marine aquaculture ordinal logistic regression: LR  $\chi^2$  (2) = 31.1, p = <0.0001, n = 621

†Seaweed farming ordinal logistic regression: LR  $\chi^2$  (2) = 105.6, p = <0.0001, n = 525

**Table C4a-b.** Results of Kruskal-Wallis H tests on factors affecting baseline familiarity with (a) marine aquaculture and (b) seaweed farming. Results are from the SW survey only; the MA survey did not ask an analogous question about baseline familiarity. Attributes of the “never heard of it” group were analyzed separately for consistency (see Tables B8 & 9).

Response: baseline familiarity	Kruskal-Wallis $\chi^2$	df	significance
a. Marine aquaculture (n = 865)			
* Age	34.17	5	<0.0001
* Education	38.64	2	<0.0001
Race	6.17	7	0.52
Region	3.63	3	0.30
b. Seaweed farming (n = 861)			
* Age	48.94	5	<0.0001
* Education	21.37	2	<0.0001
Race	6.52	7	0.09
Region	7.35	3	0.05

\*p < 0.0001; † p ≤ 0.001; ‡ p ≤ 0.01; § p < 0.05

**Table C5.** Post-hoc paired group contrasts of sociodemographic factors influencing baseline familiarity (see companion Table B4a-b). Post-hoc contrasts were calculated using the Dunn's test with a Benjamini-Hochberg FDR p-value adjustment for multiple hypothesis testing. Education level 1 = high school degree or less, 2 = some college, vocational training, or bachelor's degree, and 3 = graduate work of any kind. Counts include all complete. Responses are from the SW survey only; the MA survey did not ask an analogous question about baseline familiarity.

Response: baseline familiarity	Marine aquaculture		Seaweed farming	
Variable	z value	adjusted p	z value	adjusted p
Education paired contrasts				
Level 1 - Level 2	0.69	0.40	1.73	0.08
Level 1 - Level 3	-4.16	0.0005 ‡	-2.00	0.006 ‡
Level 2 - Level 3	-6.35	<0.0001*	-4.59	<0.0001*
Age paired contrasts				
18 to 29 – 30 to 39	-0.51	0.37	-0.92	0.46
18 to 29 – 40 to 49	-1.64	0.19	-1.83	0.10
30 to 39 – 40 to 49	-0.47	0.68	-0.91	0.42
18 to 29 – 50 to 59	0.91	0.45	0.57	0.57
30 to 39 – 50 to 59	1.85	0.14	1.28	0.27
40 to 49 – 50 to 59	2.19	0.09	2.01	0.07
18 to 29 – 60 to 69	1.19	0.35	4.20	<0.0001*
30 to 39 – 60 to 69	2.22	0.10	4.89	<0.0001*
40 to 49 – 60 to 69	2.57	0.05	5.59	0.008 ‡
50 to 59 – 60 to 69	0.14	0.89	2.90	0.002 ‡
18 to 29 – 70 +	2.14	0.08	3.32	0.0002 †
30 to 39 – 70 +	3.09	0.01‡	4.01	<0.0001*
40 to 49 – 70 +	3.40	0.01‡	4.72	<0.0001*
50 to 59 – 70 +	0.96	0.46	2.24	0.05
60 to 69 – 70 +	0.91	0.42	-0.64	0.56

\*p < 0.0001; † p ≤ 0.001; ‡ p ≤ 0.01; § p < 0.05

**Table C6a-b.** Results of Kruskal-Wallis H Tests on sociodemographic factors affecting baseline opinion of (a) marine aquaculture and (b) seaweed farming. Marine aquaculture results are from the MA and SW surveys, and seaweed farming results are from the SW survey. Participants who were “not sure” or “never heard” of the sector in question were analyzed separately (see Tables B8 & B9).

Response: baseline opinion	Kruskal-Wallis $\chi^2$	df	significance
a. Marine aquaculture (MA survey   SW survey)			
Age	26.8   18.42	5	0.77   ‡ 0.002
Education	9.06   13.46	2	‡ 0.01   † 0.001
Race	1.01   4.58	4   7	0.91   0.71
Region	3.62   2.23	2   3	0.06   0.53
b. Seaweed farming (SW survey)			
Age	15.51	5	§ 0.01
Education	12.54	2	‡ 0.002
Race	12.17	7	0.10
Region	1.73	3	0.63

\*p < 0.0001; † p ≤ 0.001; ‡ p ≤ 0.01; § p < 0.05

**Table C7.** Post-hoc paired group contrasts of sociodemographic factors influencing baseline opinions (see companion Table B.6a-b). Post-hoc contrasts were calculated using the Dunn's test with a Benjamini-Hochberg FDR p-value adjustment for multiple hypothesis testing. Education level 1 = high school degree or less, 2 = some college, vocational training, or bachelor's degree, and 3 = graduate work of any kind.

Response: baseline opinion Variable	Marine aquaculture		Seaweed farming	
	z value	adjusted p	z value	adjusted p
Education paired contrasts				
Level 1 - Level 2	-0.60	0.55	-1.71	0.09
Level 1 - Level 3	-3.08	0.003 ‡	-3.45	0.002 ‡
Level 2 - Level 3	-3.33	0.003 ‡	-2.48	0.02 §
Age paired contrasts				
18 to 29 – 30 to 39	-2.81	0.02 §	-3.10	0.03 §
18 to 29 – 40 to 49	-3.66	0.004 ‡	-2.66	0.04 §
30 to 39 – 40 to 49	-0.96	0.46	0.35	0.72
18 to 29 – 50 to 59	-2.82	0.04 §	-3.00	0.02 §
30 to 39 – 50 to 59	-0.49	0.72	-0.48	0.67
40 to 49 – 50 to 59	0.33	0.79	-0.77	0.59
18 to 29 – 60 to 69	-0.96	0.51	-1.01	0.52
30 to 39 – 60 to 69	1.55	0.26	1.75	0.24
40 to 49 – 60 to 69	2.36	0.05	1.39	0.35
50 to 59 – 60 to 69	1.78	0.19	1.93	0.20
18 to 29 – 70 +	-2.37	0.07	-1.64	0.25
30 to 39 – 70 +	0.17	0.86	0.99	0.48
40 to 49 – 70 +	1.04	0.50	0.67	0.62
50 to 59 – 70 +	0.69	0.68	1.29	0.37
60 to 69 – 70 +	-1.27	0.38	-0.62	0.61

\*p < 0.0001; †p ≤ 0.001; ‡ p ≤ 0.01; § p < 0.05

**Table C8a-b.** Results of Kruskal-Wallis H Tests on the sociodemographic characteristics of the (1) “never heard of it” and (2) “not sure” baseline opinion groups compared to (3) all other baseline opinion groups. Due to down-sampled size of MA survey results, only SW survey results are presented here.

Response: baseline opinion	Kruskal-Wallis $\chi^2$	df	significance
a. Marine aquaculture (SW survey)			
§ Age	11.98	5	0.04
† Education	15.79	2	0.0004
Race	3.92	7	0.79
Region	1.98	3	0.58
a. Seaweed farming (SW survey)			
Age	10.29	5	0.07
† Education	16.42	2	0.0003
Race	5.76	7	0.56
Region	0.96	3	0.81

\*p < 0.0001; † p ≤ 0.001; ‡ p ≤ 0.01; § p < 0.05



**Table C9.** Post-hoc paired group contrasts of sociodemographic characteristics of the (1) “never heard of it” and (2) “not sure” baseline opinion groups compared to (3) all other baseline opinion groups (see companion Table B.8a-b). Education level 1 = high school degree or less, 2 = some college, vocational training, or bachelor’s degree, and 3 = graduate work of any kind. Post-hoc contrasts were calculated using the Dunn's test with a Benjamini-Hochberg FDR p-value adjustment for multiple hypothesis testing.

Response: baseline opinion	Marine aquaculture		Seaweed farming	
Variable	z value	adjusted p	z value	adjusted p
Education paired contrasts				
Level 1 - Level 2	-1.62	0.10	0.09	0.99
Level 1 - Level 3	-3.83	0.0004 †	-3.11	0.003 ‡
Level 2 - Level 3	-3.08	0.003 ‡	-3.91	0.0002 †
Age paired contrasts				
18 to 29 – 30 to 39	-0.90	0.55	-	-
18 to 29 – 40 to 49	-2.10	0.18	-	-
30 to 39 – 40 to 49	-1.23	0.41	-	-
18 to 29 – 50 to 59	-0.92	0.60	-	-
30 to 39 – 50 to 59	-0.18	0.85	-	-
40 to 49 – 50 to 59	0.87	0.53	-	-
18 to 29 – 60 to 69	1.24	0.46	-	-
30 to 39 – 60 to 69	2.04	0.15	-	-
40 to 49 – 60 to 69	3.09	0.03 §	-	-
50 to 59 – 60 to 69	1.89	0.18	-	-
18 to 29 – 70 +	-1.41	0.39	-	-
30 to 39 – 70 +	-0.60	0.69	-	-
40 to 49 – 70 +	0.55	0.67	-	-
50 to 59 – 70 +	-0.34	0.78	-	-
60 to 69 – 70 +	-2.42	0.12	-	-

\*p < 0.0001; † p ≤ 0.001; ‡ p ≤ 0.01; § p < 0.05

**Table C10a-b.** Likelihood ratio test results (B10a) and Tukey’s post-hoc paired contrasts (B10b) for binary logistic regressions on MA and SW survey message rankings by baseline opinion. See *Appendix A* Tables 2 & 3 and Methods section 2.3 for additional information.

a. Survey	Effect	LR $\chi^2$	df	Significance
MA survey	* Message	183.78	9	<0.0001
	Baseline opinion	0.024	2	0.99
	§ Message x Baseline opinion	30.78	18	0.03
SW survey	* Message	1256.31	9	<0.0001
	Baseline opinion	0.10	4	0.99
	† Message x Baseline opinion	70.63	36	0.0005

  

b. Message	Contrast	OR $\pm$ SE	z.ratio	Significance
MA: “Producing more seafood domestically can decrease the likelihood of seafood mislabeling and fraud that occurs in some other countries.”	Favorable - Neutral/Not sure	0.664 $\pm$ 0.29	-0.92	0.36
	‡ Favorable/Unfavorable	0.153 $\pm$ 0.09	-3.08	0.01
	§ Neutral - Not sure/Unfavorable	0.231 $\pm$ 0.23	-2.45	0.02
	‡ Favorable - Unfavorable	3.78 $\pm$ 1.47	3.41	0.005
SW: “Seaweed can be an efficient source of clean, renewable energy...”	§ Not sure - Unfavorable	5.03 $\pm$ 2.75	2.95	0.03
	Neutral - Unfavorable	2.59 $\pm$ 1.04	2.38	0.12
	Never heard - Unfavorable	2.84 $\pm$ 1.14	2.60	0.07

\*p < 0.0001; †p  $\leq$  0.001; ‡ p  $\leq$  0.01; § p < 0.05

**Table C11.** Likelihood ratio test results for binary logistic regressions on MA and SW survey message rankings by region. See *Appendix A* Tables 2 & 3 and Methods section 2.3 for additional information.

Survey	Effect	LR $\chi^2$	df	Significance
MA survey	* Message	183.83	9	<0.0001
	Region	0.070	2	0.97
	Message x Region	26.70	18	0.08
SW survey	* Message	1256.57	9	<0.0001
	Region	0.46	3	0.95
	Message x Region	20.61	27	0.80

\*p <0.0001; †p ≤ 0.001; ‡ p ≤ 0.01; § p <0.05