

Supplementary File S4

Minitab 19: ANOVA general linear model results ($n = 965$), consumer perceptions of food waste environmental issue impacting their perceived value of save food packaging

General Linear Model: Environmental Issue of Food Waste versus Gender, Age, State, Living Arrangement, Education, Income, Motivation to Reduce Food Waste, Packaging Reduces Food Waste, Total Rate of Packaging, Total Efficiency Packaging Rating, Environmental Issue of Packaging Waste

Method

Factor coding (-1, 0, +1)

Factor Information

Factor	Type	Levels	Values
Gender	Fixed	2	Female, Male
Age	Fixed	6	18 - 25, 26 - 35, 36 - 45, 46 - 55, 56 - 65, 66+
State	Fixed	8	ACT, NSW, NT, QLD, SA, TAS, VIC, WA
Living Arrangement	Fixed	5	1, 2, 3, 4, 5
Education	Fixed	5	1, 2, 3, 4, 5
Income	Fixed	5	1, 2, 3, 4, 5
Motivation to Reduce Food Waste	Fixed	5	1, 2, 3, 4, 5
Packaging Reduces Food Waste	Fixed	5	1, 2, 3, 4, 5
Total Rate of Packaging	Fixed	5	1, 2, 3, 4, 5
Total Efficiency of Packaging Rating	Fixed	5	1, 2, 3, 4, 5
Environmental Issue of Packaging Waste	Fixed	5	1, 2, 3, 4, 5

Analysis of Variance

Source	D F	Seq SS	Contribution	Adj SS	Adj MS	F-Value	P-Value
Gender	1	9.33	0.79%	5.205	5.2052	5.66	0.018
Age	5	38.47	3.26%	52.719	10.5438	11.46	0.000
State	7	8.45	0.72%	6.511	0.9302	1.01	0.422
Living Arrangement	4	1.69	0.14%	1.977	0.4942	0.54	0.708

Education	4	6.68	0.57%	4.410	1.1026	1.20	0.310
Income	4	2.42	0.21%	2.328	0.5819	0.63	0.639
Motiv_ReduceWaste	4	68.86	5.84%	21.573	5.3933	5.86	0.000
Packaging Reduces Food Waste	4	20.62	1.75%	15.275	3.8188	4.15	0.002
Total Rate of Packaging	4	8.96	0.76%	0.695	0.1737	0.19	0.944
Total Efficiency of Packaging Rating	4	13.51	1.15%	1.859	0.4647	0.51	0.732
Environmental Issue of Packaging Waste	4	155.34	13.17%	155.336	38.8340	42.22	0.000
Error	9 1 9	845.32	71.66%	845.324	0.9198		
Lack-of-Fit	9 1 2	841.32	71.32%	841.324	0.9225	1.61	0.260
Pure Error	7	4.00	0.34%	4.000	0.5714		
Total	9 6 4	1179.65	100.00%				

Model Summary

S	R-sq	R-sq(adj)	PRESS	R-sq(pred)	AICc	BIC
0.959078	28.34%	24.83%	*	*	2709.70	2933.77

Coefficients

Term	Coef	SE Coef	95% CI	T-Value	P-Value	VIF
Constant	2.723	0.229	(2.274, 3.172)	11.90	0.000	
Gender						
Female	0.0818	0.0344	(0.0143, 0.1493)	2.38	0.018	1.13
Male	-0.0818	0.0344	(-0.1493, -0.0143)	-2.38	0.018	*
Age						
18 - 25	0.3567	0.0836	(0.1927, 0.5208)	4.27	0.000	1.94
26 - 35	0.2194	0.0660	(0.0899, 0.3489)	3.33	0.001	1.63
36 - 45	0.1178	0.0676	(-0.0148, 0.2503)	1.74	0.082	1.67
46 - 55	0.0515	0.0750	(-0.0958, 0.1988)	0.69	0.493	1.74
56 - 65	-0.3318	0.0768	(-0.4825, -0.1811)	-4.32	0.000	1.76
66+	-0.4136	0.0810	(-0.5725, -0.2547)	-5.11	0.000	*
State						
ACT	-0.152	0.165	(-0.476, 0.173)	-0.92	0.359	3.35
NSW	-0.0003	0.0668	(-0.1315, 0.1308)	-0.00	0.996	1.70

NT	-0.193	0.166	(-0.518, 0.132)	-1.17	0.244	3.35
QLD	0.0393	0.0774	(-0.1127, 0.1912)	0.51	0.612	1.75
SA	0.204	0.129	(-0.050, 0.458)	1.58	0.115	2.47
TAS	-0.129	0.164	(-0.450, 0.191)	-0.79	0.429	3.27
VIC	0.1041	0.0735	(-0.0401, 0.2482)	1.42	0.157	1.73
WA	0.127	0.103	(-0.075, 0.328)	1.24	0.217	*
LivArrange						
1	0.0681	0.0672	(-0.0638, 0.2001)	1.01	0.311	1.44
2	-0.0151	0.0818	(-0.1756, 0.1453)	-0.19	0.853	1.55
3	-0.0577	0.0686	(-0.1924, 0.0770)	-0.84	0.401	1.40
4	0.0424	0.0565	(-0.0685, 0.1533)	0.75	0.454	1.36
5	-0.0377	0.0851	(-0.2047, 0.1294)	-0.44	0.658	*
Education						
1	0.0593	0.0943	(-0.1258, 0.2443)	0.63	0.530	3.73
2	-0.0279	0.0663	(-0.1579, 0.1022)	-0.42	0.674	2.70
3	0.120	0.102	(-0.080, 0.320)	1.18	0.239	4.03
4	-0.1401	0.0669	(-0.2715, -0.0087)	-2.09	0.037	2.77
5	-0.0114	0.0584	(-0.1261, 0.1034)	-0.19	0.846	*
Income						
1	0.1057	0.0866	(-0.0643, 0.2757)	1.22	0.223	1.59
2	0.0070	0.0629	(-0.1164, 0.1304)	0.11	0.911	1.35
3	-0.0131	0.0550	(-0.1211, 0.0949)	-0.24	0.812	1.17
4	-0.0944	0.0689	(-0.2297, 0.0409)	-1.37	0.171	1.31
5	-0.0053	0.0945	(-0.1908, 0.1802)	-0.06	0.955	*
Motiv_ReduceWaste						
1	-0.0226	0.0747	(-0.1692, 0.1240)	-0.30	0.762	2.15
2	0.0448	0.0619	(-0.0768, 0.1664)	0.72	0.470	1.86
3	-0.2858	0.0645	(-0.4124, -0.1593)	-4.43	0.000	2.02
4	0.1067	0.0668	(-0.0244, 0.2377)	1.60	0.110	1.95
5	0.1570	0.0624	(0.0345, 0.2794)	2.52	0.012	*
Pack_ReduceFW						
1	0.126	0.118	(-0.104, 0.357)	1.07	0.283	2.54
2	-0.1883	0.0711	(-0.3278, -0.0488)	-2.65	0.008	1.63
3	-0.1385	0.0584	(-0.2531, -0.0238)	-2.37	0.018	1.54
4	-0.0296	0.0614	(-0.1501, 0.0910)	-0.48	0.631	1.57
5	0.2301	0.0817	(0.0697, 0.3905)	2.82	0.005	*

TotalRatePack

1	-0.033	0.302	(-0.626, 0.560)	-0.11	0.913	8.43
2	0.013	0.115	(-0.212, 0.238)	0.11	0.911	2.55
3	-0.0268	0.0938	(-0.2109, 0.1573)	-0.29	0.775	3.48
4	-0.0258	0.0915	(-0.2054, 0.1538)	-0.28	0.778	3.53
5	0.073	0.126	(-0.174, 0.319)	0.58	0.564	*

TotalEffPackRating

1	-0.508	0.835	(-2.147, 1.131)	-0.61	0.543	109.11
2	0.109	0.348	(-0.575, 0.793)	0.31	0.754	20.25
3	0.119	0.227	(-0.326, 0.564)	0.52	0.600	24.66
4	0.082	0.224	(-0.359, 0.522)	0.36	0.717	30.95
5	0.199	0.227	(-0.248, 0.645)	0.87	0.383	*

EnvIssue_PackagingWaste

1	-1.209	0.282	(-1.762, -0.655)	-4.29	0.000	21.80
2	-0.516	0.132	(-0.775, -0.257)	-3.92	0.000	6.17
3	0.2056	0.0965	(0.0162, 0.3949)	2.13	0.033	5.54
4	0.5167	0.0909	(0.3383, 0.6952)	5.68	0.000	6.34
5	1.0025	0.0893	(0.8272, 1.1777)	11.23	0.000	*

Regression Equation

$$\begin{aligned}
 \text{Environmental Issue of Food Waste} = & 2.723 + 0.0818 \text{ Gender_Female} - 0.0818 \text{ Gender_Male} + 0.3567 \text{ Age_18 - 25} \\
 & + 0.2194 \text{ Age_26 - 35} + 0.1178 \text{ Age_36 - 45} + 0.0515 \text{ Age_46 - 55} \\
 & - 0.3318 \text{ Age_56 - 65} - 0.4136 \text{ Age_66+} - 0.152 \text{ State_ACT} \\
 & - 0.0003 \text{ State_NSW} - 0.193 \text{ State_NT} + 0.0393 \text{ State_QLD} + 0.204 \text{ State_SA} \\
 & - 0.129 \text{ State_TAS} + 0.1041 \text{ State_VIC} + 0.127 \text{ State_WA} \\
 & + 0.0681 \text{ LivArrange_1} - 0.0151 \text{ LivArrange_2} - 0.0577 \text{ LivArrange_3} \\
 & + 0.0424 \text{ LivArrange_4} - 0.0377 \text{ LivArrange_5} + 0.0593 \text{ Education_1} \\
 & - 0.0279 \text{ Education_2} + 0.120 \text{ Education_3} - 0.1401 \text{ Education_4} \\
 & - 0.0114 \text{ Education_5} + 0.1057 \text{ Income_1} + 0.0070 \text{ Income_2} \\
 & - 0.0131 \text{ Income_3} - 0.0944 \text{ Income_4} - 0.0053 \text{ Income_5} \\
 & - 0.0226 \text{ Motiv_ReduceWaste_1} + 0.0448 \text{ Motiv_ReduceWaste_2} \\
 & - 0.2858 \text{ Motiv_ReduceWaste_3} + 0.1067 \text{ Motiv_ReduceWaste_4} \\
 & + 0.1570 \text{ Motiv_ReduceWaste_5} + 0.126 \text{ Pack_ReduceFW_1} \\
 & - 0.1883 \text{ Pack_ReduceFW_2} - 0.1385 \text{ Pack_ReduceFW_3} \\
 & - 0.0296 \text{ Pack_ReduceFW_4} + 0.2301 \text{ Pack_ReduceFW_5} \\
 & - 0.033 \text{ TotalRatePack_1} + 0.013 \text{ TotalRatePack_2} - 0.0268 \text{ TotalRatePack_3} \\
 & - 0.0258 \text{ TotalRatePack_4} + 0.073 \text{ TotalRatePack_5} \\
 & - 0.508 \text{ TotalEffPackRating_1} + 0.109 \text{ TotalEffPackRating_2} \\
 & + 0.119 \text{ TotalEffPackRating_3} + 0.082 \text{ TotalEffPackRating_4} \\
 & + 0.199 \text{ TotalEffPackRating_5} - 1.209 \text{ EnvIssue_PackagingWaste_1} \\
 & - 0.516 \text{ EnvIssue_PackagingWaste_2} + 0.2056 \text{ EnvIssue_PackagingWaste_3} \\
 & + 0.5167 \text{ EnvIssue_PackagingWaste_4} + 1.0025 \text{ EnvIssue_PackagingWaste_5}
 \end{aligned}$$

Means

Term	Fitted Mean	SE Mean
Gender		
Female	2.805	0.229
Male	2.641	0.234
Age		
18 - 25	3.080	0.244
26 - 35	2.943	0.241
36 - 45	2.841	0.239
46 - 55	2.775	0.240
56 - 65	2.392	0.237
66+	2.310	0.245
State		
ACT	2.572	0.287
NSW	2.723	0.226
NT	2.530	0.289
QLD	2.763	0.234
SA	2.927	0.265
TAS	2.594	0.290
VIC	2.827	0.233
WA	2.850	0.250
Living Arrangement		
1	2.791	0.234
2	2.708	0.246
3	2.666	0.240
4	2.766	0.232
5	2.686	0.248
Education		
1	2.783	0.254
2	2.695	0.236
3	2.843	0.253
4	2.583	0.238
5	2.712	0.229
Income		
1	2.829	0.247
2	2.730	0.232
3	2.710	0.231

4	2.629	0.238
5	2.718	0.256
Motiv_ReduceWaste		
1	2.701	0.241
2	2.768	0.238
3	2.437	0.238
4	2.830	0.240
5	2.880	0.233
Packaging Reduces Food Waste		
1	2.850	0.265
2	2.535	0.238
3	2.585	0.233
4	2.694	0.232
5	2.953	0.244
Total Rate of Packaging		
1	2.690	0.427
2	2.736	0.244
3	2.697	0.226
4	2.697	0.225
5	2.796	0.235
Total Efficiency of Pack Rating		
1	2.22	1.02
2	2.832	0.359
3	2.842	0.129
4	2.805	0.130
5	2.922	0.146
Environmental Issue of Packaging Waste		
1	1.515	0.358
2	2.207	0.277
3	2.929	0.248
4	3.240	0.245
5	3.726	0.241
