Appendix of the Shift in Consumers' Brand Preference of Grocery Products from Major Brands to Private Labels: Evidence from a Dutch Retailer

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1 All Modeling Results

1.1 Raw Chicken

Table 1: Modeling Results of Raw Chicken. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-4.350	0.001	-4972.373	0.000	-4.352	-4.348
Unit Price	-356.330	0.830	-429.456	0.000	-357.957	-354.704
Brand Actie	-0.079	0.001	-53.112	0.000	-0.082	-0.076
Brand Biologisch	-2.172	0.004	-615.663	0.000	-2.179	-2.165

1.2 Raw Beef

Table 2: Modeling Results of Raw Beef. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-2.877	0.001	-3210.575	0.000	-2.879	-2.875
Unit Price	-230.899	0.120	-1930.330	0.000	-231.133	-230.664
Brand Actie	-1.217	0.002	-788.045	0.000	-1.220	-1.214
Brand Biologisch	-0.053	0.001	-54.762	0.000	-0.055	-0.051
Brand Chefs'tip	1.354	0.002	795.638	0.000	1.351	1.357

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1.3   Fresh Fruit

Table 3: Modeling Results of Fresh Fruit. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-1.553	0.000	-4612.291	0.000	-1.554	-1.552
Unit Price	-1214.983	0.235	-5178.099	0.000	-1215.443	-1214.523
Brand Agf	-1.928	0.001	-3021.451	0.000	-1.929	-1.927
Brand Bel Impex	-4.609	0.003	-1838.756	0.000	-4.614	-4.605
Brand Zespri	-1.529	0.001	-1722.329	0.000	-1.530	-1.527

1.4   Fresh Salad Vegetable

Table 4: Modeling Results of Fresh Salad Vegetable. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-1.741	0.002	-738.544	0.000	-1.746	-1.737
Unit Price	-202.619	0.249	-813.183	0.000	-203.108	-202.131
Brand Bieze	-0.708	0.002	-432.339	0.000	-0.711	-0.705
Brand La Place	-0.107	0.003	-34.563	0.000	-0.113	-0.101

1.5   Baguette Bread

Table 5: Modeling Results of Baguette Bread. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	0.644	0.001	475.609	0.000	0.642	0.647
Unit Price	-966.979	0.395	-2449.671	0.000	-967.752	-966.205
Brand Bake Off	-1.717	0.002	-862.771	0.000	-1.721	-1.713
Brand La Place	-3.473	0.007	-475.043	0.000	-3.487	-3.458

1.6   Spreadable Cheese

Table 6: Modeling Results of Spreadable Cheese. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-2.672	0.001	-3209.392	0.000	-2.674	-2.671
Unit Price	-88.979	0.091	-976.048	0.000	-89.158	-88.800
Brand Eru	-0.224	0.001	-364.951	0.000	-0.226	-0.223
Brand Heksnkaas	-0.372	0.001	-322.905	0.000	-0.375	-0.370
Brand Paturain	0.268	0.001	218.580	0.000	0.265	0.270
Brand Philadelphia	-0.753	0.001	-789.005	0.000	-0.755	-0.752

1.7   Toiletpaper

Table 7: Modeling Results of Toiletpaper. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	1.227	0.002	637.798	0.000	1.223	1.231
Unit Price	-18.805	0.010	-1802.513	0.000	-18.825	-18.784
Brand Edet	-2.740	0.002	-1572.356	0.000	-2.743	-2.737
Brand Page	-1.705	0.001	-1683.509	0.000	-1.707	-1.703
Brand Sammy	-2.921	0.002	-1493.230	0.000	-2.925	-2.917

1.8   Dishwasher Pods

Table 8: Modeling Results of Dishwasher Pods. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-1.991	0.001	-1379.006	0.000	-1.994	-1.988
Unit Price	-14.656	0.027	-545.835	0.000	-14.709	-14.604
Brand Dreft	-0.139	0.002	-56.839	0.000	-0.144	-0.134
Brand Finish	-1.429	0.003	-532.200	0.000	-1.434	-1.424
Brand Sun	-1.005	0.003	-400.255	0.000	-1.009	-1.000

1.9   Milk

Table 9: Modeling Results of Milk for Pre-COVID. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	3.157	0.001	2412.106	0.000	3.154	3.159
Unit Price	-1266.809	0.283	-4473.526	0.000	-1267.364	-1266.254
Brand Campina	0.463	0.001	908.696	0.000	0.462	0.464
Brand Melkunie	-2.057	0.001	-1495.277	0.000	-2.060	-2.054

Table 10: Modeling Results of Milk for COVID. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	5.325	0.001	4203.098	0.000	5.323	5.328
Unit Price	-1666.573	0.268	-6227.836	0.000	-1667.097	-1666.048
Brand Campina	0.266	0.000	620.756	0.000	0.265	0.267
Brand Melkunie	-2.772	0.001	-2071.482	0.000	-2.774	-2.769

1.10   Earl Grey Tea

Table 11: Modeling Results of Earl Grey Tea for Pre-COVID. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-1.907	0.003	-758.937	0.000	-1.912	-1.902
Unit Price	-43.703	0.093	-469.105	0.000	-43.885	-43.520
Brand Lipton	0.671	0.003	220.898	0.000	0.665	0.677
Brand Pickwick	1.950	0.003	663.515	0.000	1.944	1.955
Brand Clipper	1.731	0.006	281.858	0.000	1.719	1.743

Table 12: Modeling Results of Earl Grey Tea for COVID. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-1.434	0.003	-536.531	0.000	-1.440	-1.429
Unit Price	-51.240	0.106	-481.932	0.000	-51.448	-51.031
Brand Lipton	0.404	0.003	136.096	0.000	0.399	0.410
Brand Pickwick	1.551	0.003	563.315	0.000	1.546	1.557
Brand Clipper	0.869	0.006	147.335	0.000	0.857	0.880

1.11 Extruded Snacks

Table 13: Modeling Results of Extruded Snacks for Pre-COVID. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-3.755	0.001	-3110.545	0.000	-3.757	-3.752
Unit Price	-587.047	0.810	-724.843	0.000	-588.635	-585.460
Brand Lay's	1.276	0.001	1239.003	0.000	1.274	1.278
Brand Cheetos	1.620	0.001	1424.793	0.000	1.618	1.622
Brand Chio	1.060	0.001	1040.819	0.000	1.058	1.062

Table 14: Modeling Results of Extruded Snacks for COVID. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-3.639	0.001	-3180.294	0.000	-3.641	-3.637
Unit Price	-1623.791	1.412	-1149.627	0.000	-1626.559	-1621.022
Brand Lay's	2.075	0.001	1734.010	0.000	2.073	2.078
Brand Cheetos	2.610	0.001	2082.573	0.000	2.608	2.613
Brand Chio	1.450	0.001	1183.502	0.000	1.447	1.452

1.12   Fabric Softeners

Table 15: Modeling Results of Fabric Softeners for Pre-COVID. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	0.271	0.005	54.001	0.000	0.261	0.281
Unit Price	-408.854	0.562	-727.815	0.000	-409.955	-407.752
Brand Robijn	0.917	0.002	388.571	0.000	0.912	0.921
Brand Silan	-0.830	0.004	-235.731	0.000	-0.837	-0.823
Brand Lenor	-0.582	0.002	-277.168	0.000	-0.586	-0.578

Table 16: Modeling Results of Fabric Softeners for COVID. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-0.566	0.007	-85.789	0.000	-0.579	-0.553
Unit Price	-370.408	0.942	-393.393	0.000	-372.253	-368.562
Brand Robijn	0.450	0.002	186.882	0.000	0.445	0.455
Brand Silan	-0.967	0.004	-271.361	0.000	-0.974	-0.960
Brand Lenor	-1.896	0.007	-266.398	0.000	-1.910	-1.882

1.13   Shampoo

Table 17: Modeling Results of Shampoo for Pre-COVID. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-2.820	0.002	-1314.503	0.000	-2.825	-2.816
Unit Price	-163.460	0.417	-392.118	0.000	-164.277	-162.643
Brand Andrelon	1.063	0.004	267.356	0.000	1.055	1.070
Brand Elvive	1.054	0.006	181.902	0.000	1.043	1.066
Brand H&S	1.099	0.007	167.785	0.000	1.086	1.112
Brand Schwarzkopf	0.143	0.003	47.437	0.000	0.137	0.149

Table 18: Modeling Results of Shampoo for COVID. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-2.619	0.003	-891.475	0.000	-2.625	-2.613
Unit Price	-144.243	0.504	-286.013	0.000	-145.231	-143.254
Brand Andrelon	0.700	0.005	140.856	0.000	0.690	0.710
Brand Elvive	0.669	0.007	93.183	0.000	0.655	0.683
Brand H&S	0.743	0.008	87.665	0.000	0.727	0.760
Brand Schwarzkopf	-0.057	0.004	-14.095	0.000	-0.064	-0.049

1.14   Toothpaste

Table 19: Modeling Results of Toothpaste for Pre-COVID. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-2.991	0.003	-919.329	0.000	-2.997	-2.985
Unit Price	-46.189	0.060	-766.206	0.000	-46.307	-46.070
Brand Colgate	0.373	0.004	101.556	0.000	0.365	0.380
Brand Oral B	0.503	0.004	113.473	0.000	0.495	0.512
Brand Prodent	0.416	0.004	118.003	0.000	0.409	0.423
Brand Sensodyne	1.491	0.004	335.061	0.000	1.483	1.500

Table 20: Modeling Results of Toothpaste for COVID. LB and UB are lower bound and upper bound of the 95% confidence intervals.

	Coefficient	S.E.	Z Score	$P > |z|$	LB	UB
Intercept	-2.844	0.004	-742.583	0.000	-2.851	-2.836
Unit Price	-34.091	0.068	-500.976	0.000	-34.225	-33.958
Brand Colgate	0.011	0.004	2.600	0.009	0.003	0.020
Brand OralB	0.037	0.005	7.058	0.000	0.027	0.048
Brand Prodent	0.282	0.004	66.635	0.000	0.274	0.290
Brand Sensodyne	0.777	0.005	147.137	0.000	0.767	0.787