Answering sheet Asignment Marketing Models

Student information

Name: Name

Student Number: Student number

Details Data

Number of the dataset used for solving the exercise: 02

Details Coding

Which computer language/program did you use?: R

What was the version number of the software that you used?: 4.1.2

Estimation Results:

Fill in the next table using your estimation output:

parameter	ML estimate	standard error
Heinz 28 ounces	0	N.A.
Heinz 32 ounces	-0.8766927489321	0.09031830529507
Heinz 40 ounces	-0.9866161245877	0.10210759866370
Hunts 32 ounces	-2.3161586114049	0.11123244577070
price	-138.42764244922	6.75734538081537
display	0.80498925278140	0.11233240647576
feature	0.76654955743772	0.13564694301765

Maximum Log Likelihood value: -1836.6413922549

McFadden R^2: 0.18806000084678

Partial Effects:

Fill in the table with average partial effects of prices where element (j,k) denotes the marginal change in the choice probability of brand j due to a change in the price of brand k.

	average partial effects of price			
brand	Heinz 28 ounces	Heinz 32 ounces	Heinz 40 ounces	Hunts 32 ounces
Heinz 28 ounces	-21.447943555245	14.9868656910127	2.46154393253227	3.99953393170029
Heinz 32 ounces	14.9868656910127	-26.626701327408	4.46709135310935	7.17274428328604
Heinz 40 ounces	2.46154393253227	4.46709135310935	-8.0752625583458	1.14662727270421
Hunts 32 ounces	3.99953393170029	7.17274428328604	1.14662727270421	-12.318905487690

Effects of Hunts display promotion:
Fill in the table with the average effects of a display promotion for Hunts 32 ounces (with no feature promotion for Hunts and no feature nor display promotion for any other brand-sizes) on the probabilities of all 4 brand-sizes relative to a scenario in which there are no feature nor display promotions for any brand-sizes (including Hunts).

brand	Heinz 28 ounces	Heinz 32 ounces	Heinz 40 ounces	Hunts 32 ounces
Effect	-0.0299614374195	-0.0528250629377	-0.0083513885218	0.09113788887916

Hausman Test:
Test the assumption of the independence of irrelevant alternatives by implementing a Hausman test comparing the unrestricted model with a restricted model that does not include the Heinz 40 ounces observations.

Test Statistic	49.7106750117318
P-value	1.58815832011265