Answering sheet Asignment Marketing Models

Student information

Name: Name
Student Number: Student number

Details Data

Number of the dataset used for solving the exercise: 91

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	-0.8611283419133	0.08927283382126
Heinz 40 ounces	-0.9972986531683	0.10151177884241
Hunts 32 ounces	-2.338758603536	0.11119129152730
price	-137.19978232703	6.67119932643332
display	0.86180881802247	0.11358052697513
feature	0.87961438220198	0.13494118628028

Maximum Log Likelihood value: -1823.4924566138

McFadden R^2: 0.19386693503266

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	-21.329824091017	14.9366823724152	2.5137025189711	3.87943919963157
Heinz 32 ounces	14.9366823724152	-26.213657911623	4.42486579594064	6.85210974326723
Heinz 40 ounces	2.5137025189711	4.42486579594064	-8.0518483507784	1.11328003586671
Hunts 32 ounces	3.87943919963157	6.85210974326723	1.11328003586671	-11.844828978765

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	-0.03372698365960	-0.05963437196061	-0.00943444018054	0.10279579580082

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	18.9440794331138
P-value	0.00196878289797