Answering sheet Asignment Marketing Models

Student information

Name: Name
Student Number: Student number

Details Data

Number of the dataset used for solving the exercise: 87

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	-0.9099475390755(	0.09175031705848
Heinz 40 ounces	-1.0575669250456(	0.10358588450565
Hunts 32 ounces	-2.4318026510009	0.11479963494848
price	-140.52754905535	6.85683982610866
display	0.94115312871722	0.11600230955480
feature	0.85156392535698	0.13343119351723

Maximum Log Likelihood value: -1780.0312913601

McFadden R^2: 0.20369095548691

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	-21.546657674176	15.2793436053718	2.45498454664637	3.81232952215876
Heinz 32 ounces	15.2793436053718	-26.374214600203	4.36426857902307	6.73060241580846
Heinz 40 ounces	2.45498454664637	4.36426857902307	-7.8540178725373	1.03476474686794
Hunts 32 ounces	3.81232952215876	6.73060241580846	1.03476474686794	-11.577696684835

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	-0.0348632463674	-0.0607544589048	-0.0092085381419	0.10482624341423

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	13.9576968462154
P-value	0.01588037600392