Humboldt University Berlin

Institute of Marketing

Prof. Dr. Daniel Klapper

Advanced Marketing Modeling

SS 2018

Special Work Performance 2: Response Models for Aggregated Data

This is group work. Each group consists of up to 4 students.

Your answers including all tables and graphs must not exceed 5 pages. Please start a new page when providing your report to a new subtask. Please use typeface Times Roman in 12pt with 1.15 line spacing (in tables and graphs you may use 10pt and 1.0 line spacing) and 1 inch space on all sides. Do not forget to report your names, group number, and student numbers and a page number on each page starting with number one on the first answering page.
Do not include a title page or content page.
Send your team report as pdf to my email address daniel.klapper@hu-berlin.de not later than May, 30, 2018, 9:00am.

Download the dataset "cola_amm_boston.csv" from the Moodle course page. The data are store-level scanner data from seven chains and 32 stores in Boston, reporting sales, revenue measures and marketing activities of 4 cola brands (Coke Classic, Diet Coke, Pepsi, Diet Pepsi) sold in two different packages (cans and bottles) and different package sizes. The data cover the period from January 2001 till December 2011. Your dataset has 132302 (first row reports the variable names) data rows and 22 columns. The columns provide information about the following criteria:

1. MARKET
2. CHAIN
3. store_type
4. iri_key
5. year
6. week
7. L4
8. L5
9. VOL_EQ
10. PACKAGE
11. units
12. dollars
13. price
14. price_deflated
15. feature

16. display

17. total_vol_carbbev
    (i.e. total carbonated beverages volume in store)
18. total_rev_carbbev
    (i.e. total carbonated beverages revenue in store)
19. total_vol_cola (i.e. total cola volume in store)
20. total_rev_cola (i.e. total cola revenue in store)
21. total_vol_l4 (i.e. manufacturer cola volume in store)
22. total_rev_l4 (i.e. manufacturer cola revenue in store)

Additional information about the data is found on Moodle and is discussed in class.

This special work performance is designed that you get familiar with your data, to learn to explore data structures and to estimate the effect of price and promotion on sales.

Use the data from chain 33 and 65 only!

SPW 2a:
Describe the data from chain 33 and 65 in a meaningful way so that the uniformed reader understands the key features of the data.
Do not report R-code and edit tables in such a way that they are easily and intuitively understandable.
Document your data description strategy in some detail and be as precise and as explicitly as possible.
(2 pages maximum).

SPW 2b:
Use the data from chain 33 and 65 and compute aggregated data for each chain. Use this data to estimate the effect of price on demand and the multiplier effect of display and feature activity on sales at the brand, package and chain (store type)-level. To do this, regress log of units on log price and promotional instruments and potential seasonal and other variables. Do the analysis separately for each brand, package size and chain (store type) and document the estimation results in one table that contains all important estimation results and that allows an intuitive understanding of the key similarities and discrepancies of the estimation results across brands, package size and store type. Interpret the results carefully and also document your estimation strategy in some detail. Do not report R-codes and edit the estimation results you obtained with R.
(3 pages maximum).