Data Description:

* There are 799 households in the data
* We have visibility to weekly purchasing data for each hh (note for some weeks a hh may not have made a weekly grocery trip)
* The data is sorted by household “id” and “weeksin” (see first two variables below).
* Each row represents a weekly observation
* The columns of that data are as below, with descriptive statistics following the below table. Following the descriptive statistics is a description of the 30 direct mail promotional campaigns
* Note, some variables refer to a household’s “top favorite 30 categories”. This was something I calculated and ranked based on the average number of purchases made per category for that household.

|  |  |
| --- | --- |
| **VARIABLE NAME** | **VARIABLE DESCRIPTION** |
| Id | Household (hh) id |
|  |  |
| Weeksin | Number of weeks the panelist has been in the database |
| calendarweek | Calendar week (1-102, where “1” = the week of March 23, 2005 |
|  |  |
| Purweek | 0/1 indicator variable for weeks the hh made a shopping trip |
| storeshopped | Store number shopped at on weeks the hh made a shopping trip |
| Zipcode | Zipcode of store shopped |
| interpurtime | Number of weeks inbetween this week and last purchase week |
|  |  |
| Weeklyspend | Total amount spent this week (note, this could have been over multiple trips) |
| spendingavg | Average weekly expenditures of this week and last three weeks |
|  |  |
| T\_loydisc\_FB | Total value of loyalty card discounts advertised this week on the hhs’ favorite brands in the hh’s top 30 categories  “Value in $ or % assuming value in Dollars” |
| W\_loydisc\_FB | Weighted value of loyalty card discounts advertised this week on the household’s favorite brands in the hh’s top 30 favorite categories (discounts for favorite brand in the favorite category got the greatest weight)  “I think it’s the weight of dis in fav brand and fav category with respect to total discount advertized.” |
| T\_loydisc\_CAT | Total value of loyalty card discounts advertised that week on any brand in the hhs’ top 30 categories |
| W\_loydisc\_CAT | Weighted value of loyalty card discounts advertised that week on any brand in the hh’s top 30 favorite categories (discounts for favorite brand in the favorite category got the greatest weight) |
| T\_Display | Total number of a hh’s top 30 favorite categories with an end-of-aisle display that week |
| W\_Display | Weighting of the hh’s top 30 favorite categories that had an end-of-aisle display for any brand in that category (displays in the favorite category got the greatest weight)”Need to understand how these are calculated” |
| T\_Mailer | Total number of a hh’s top 30 favorite categories featured in the weekly mailer |
| W\_Mailer | Weighting of the hh’s top 30 favorite categories featured in the weekly mailer (favorite category got the greatest weight) |
|  |  |
| C1-C30 | 30 dummy variables indicating if the household was currently being exposed to promotional campaigns 1-30 (there were some campaigns that overlapped their start or end date, so a given hh could be exposed to more than one campaign at a time) |
| NumA\_now | Number of Type A campaigns hh currently exposed to |
| NumB\_now | Number of Type B campaigns hh currently exposed to |
| NumC\_now | Number of Type C campaigns hh currently exposed to |
| NumAll\_Now | Total number of campaigns currently exposed to |
| NumA\_Ever | Number of A campaigns hh ever exposed to |
| NumB\_Ever | Number of B campaigns hh ever exposed to |
| NumC\_Ever | Number of campaigns hh ever exposed to |
|  |  |
| T\_Acoup | Total number of coupons provided in the current type A campaign if the hh was currently in an A campaign |
| W\_Acoup | A weighting of the number of coupons provided in the current type A campaign, if the hh was currently in an A campaign, weighted based on the hhs 30 favorite categories |
| T\_Bcoup | Total number of coupons provided in the current type B campaign if the hh was currently in an B campaign |
| W\_Bcoup | A weighting of the number of coupons provided in the current type B campaign, if the hh was currently in an B campaign, weighted based on the hhs 30 favorite categories |
| T\_Ccoup | Total number of coupons provided in the current type C campaign if the hh was currently in an C campaign |
| W\_Ccoup | A weighting of the number of coupons provided in the current type C campaign, if the hh was currently in an C campaign, weighted based on the hhs 30 favorite categories |
| T\_CATcoup | Some of the Type A coupons were for categories (i.e., save $1 when you spend $5 on produce) so this variable captures the total number of category coupons in the hh’s top 30 categories |
| W\_CATCoup | A weighting of the number of category coupons provided in the type A campaign, if the hh was currently in an A campaign, weighted based on the hhs 30 favorite categories |
| T\_FavBrndcoup | Total number of coupons provided in the current campaign that were for the hh favorite brand in one of the top 30 categories |
| W\_FavBrndcoup | A weighting of the number of coupons provided in the current campaign that were for the hh’s favorite brand, weighted based on the hhs 30 favorite categories |
|  |  |
| age | Age of head of household |
| married | Dummy = to 1 if couple is married |
| income | Hh income |
| hhsize | Total number of people living in hh |
| numkids | Number of kids |

The MEANS Procedure

Variable N Mean Std Dev Minimum Maximum

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id 73863 1233.02 735.2633606 1.0000000 2499.00

weeksin 73863 46.9656120 27.0378070 1.0000000 102.0000000

calendarweek 73863 56.0343880 27.0378070 1.0000000 102.0000000

purweek 73863 0.7267915 0.4456100 0 1.0000000

StoreShopped 73863 2278.63 7746.98 0 34280.00

zipcode 53683 44686.40 1513.83 41005.00 47331.00

interpurtime 73863 0.7038165 2.2633338 0 49.0000000

weeklyspend 73863 60.3771731 70.4624408 0 1277.98

SpendingAvg 73863 60.5030048 51.4252538 0 828.8600000

T\_loydisc\_FB 73863 -13.0618148 5.2046589 -194.5700000 -0.2300000

W\_loydisc\_FB 73863 -0.4317699 0.2345632 -15.3600000 0

T\_loydisc\_CAT 73863 -19.4096962 4.0580868 -62.9900000 -6.6200000

W\_loydisc\_CAT 73863 -0.6883289 0.1936118 -7.9500000 -0.1200000

T\_Display 73863 13.1494253 9.3176836 0 30.0000000

W\_Display 73863 0.4427436 0.3182567 0 1.0000000

T\_Mailer 73863 14.3674912 9.6700353 0 30.0000000

W\_Mailer 73863 0.5064394 0.3440991 0 1.0000000

C1 73863 0.000487389 0.0220717 0 1.0000000

C2 73863 0.0014622 0.0382106 0 1.0000000

C3 73863 0.0010966 0.0330974 0 1.0000000

C4 73863 0.0044677 0.0666921 0 1.0000000

C5 73863 0.0082044 0.0902063 0 1.0000000

C6 73863 0.0038991 0.0623214 0 1.0000000

C7 73863 0.0093416 0.0962002 0 1.0000000

C8 73863 0.0624941 0.2420524 0 1.0000000

C9 73863 0.0092604 0.0957850 0 1.0000000

C10 73863 0.0060111 0.0772986 0 1.0000000

C11 73863 0.0141884 0.1182679 0 1.0000000

C12 73863 0.0072296 0.0847197 0 1.0000000

C13 73863 0.0660683 0.2484031 0 1.0000000

C14 73863 0.0186562 0.1353084 0 1.0000000

C15 73863 0.0016246 0.0402742 0 1.0000000

C16 73863 0.0098290 0.0986536 0 1.0000000

C17 73863 0.0102352 0.1006506 0 1.0000000

C18 73863 0.0783478 0.2687199 0 1.0000000

C19 73863 0.0060924 0.0778160 0 1.0000000

C20 73863 0.0218919 0.1463315 0 1.0000000

C21 73863 0.0034930 0.0589983 0 1.0000000

C22 73863 0.0148654 0.1210148 0 1.0000000

C23 73863 0.0108850 0.1037626 0 1.0000000

C24 73863 0.0090167 0.0945278 0 1.0000000

C25 73863 0.0107226 0.1029938 0 1.0000000

C26 73863 0.0162057 0.1262667 0 1.0000000

C27 73863 0.000947700 0.0307704 0 1.0000000

C28 73863 0.0016246 0.0402742 0 1.0000000

C29 73863 0.0077982 0.0879631 0 1.0000000

C30 73863 0.0187915 0.1357891 0 1.0000000

NumA\_now 73863 0.2419073 0.4282413 0 1.0000000

Variable N Mean Std Dev Minimum Maximum

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NumB\_now 73863 0.1452148 0.4010227 0 4.0000000

NumC\_now 73863 0.0481161 0.2152745 0 2.0000000

NumAll\_Now 73863 0.4352382 0.6924118 0 5.0000000

NumA\_Ever 73863 1.0637261 1.3598800 0 5.0000000

NumB\_Ever 73863 0.6398197 1.2234772 0 9.0000000

NumC\_Ever 73863 0.1277500 0.4211797 0 4.0000000

T\_Acoup 73863 1.8192871 3.4249376 0 19.0000000

W\_Acoup 73863 0.0710314 0.1445047 0 1.2000000

T\_Bcoup 73863 1.0482244 3.3944037 0 40.0000000

W\_Bcoup 73863 0.0428792 0.1490591 0 2.1700000

T\_Ccoup 73863 0.2174296 1.2588324 0 22.0000000

W\_Ccoup 73863 0.0051751 0.0309406 0 0.5600000

T\_CATcoup 73863 4.7354697 9.9624884 0 43.0000000

W\_CATcoup 73863 0.1639066 0.3479939 0 1.6400000

T\_FavBrndcoup 73863 4.0570245 7.4899171 0 35.0000000

W\_FavBrndcoup 73863 0.1429357 0.2650815 0 1.6900000

age 73863 44.4241637 11.7282687 22.0000000 65.0000000

married 73863 0.4249895 0.4943448 0 1.0000000

income 73863 64185.72 47015.36 15000.00 250000.00

hhsize 73863 2.1994503 1.1966468 1.0000000 5.0000000

numkids 73863 0.5537955 0.9597093 0 3.0000000

**Table X**

**General Description of Three Types of Direct Promotions**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **“Loyalty Card Mailer” (Type A)** | **“Themed Event Mailer”**  **(Type B)** | **“Solo Mailer”**  **(Type C)** |
| **Description** | An envelope reading “Customer Appreciation Coupons Inside” on the front and “Thanks for shopping with us!” on the back and containing ~14-16 coupons specially chosen for that household with a note at the top of the coupon page reading: “Thanks for being such a great customer! Please enjoy the savings reserved only for premier customers like you.” | A “magazine” or “brochure” with some type of theme (e.g., “Back to School”, “Healthy Living”, “Breakfast”, etc.) with recipes, suggestions, and mass coupons (i.e., not customized to the household) around that theme. Mailer typically read, “Premier customer coupons inside” and/or “Thanks for shopping with us.” | A single manufacturer sponsored booklet with on 1-34 coupons and perhaps with a free sample. Mailer typically read something like the following: “Best customer savings inside!”, “Free gift just for you!”, and/or “Thanks for shopping with us.” |

**Table X**

**Detailed Description of Thirty Promotions**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Campaign # | Type | Number of Coupons Sent | Length of Campaign in Weeks | Start Week | End Week | Promotion Description |
| 1 | B | 11 | 5 | 50 | 55 | Save on groceries for family |
| 2 | B | 16 | 5 | 50 | 55 | Save on groceries for family |
| 3 | C | 34 | 8 | 51 | 59 | Lady of the House, Take Care of Self and Family |
| 4 | B | 12 | 5 | 53 | 58 | Baking Grocery Supplies |
| 5 | B | 11 | 5 | 54 | 59 | Baby Stuff |
| 6 | C | 1 | 5 | 56 | 61 | National Brand, Yogurt Multi-Paks |
| 7 | B | 8 | 5 | 57 | 62 | Lady of the House, Take Care of Self and Family |
| 8 | A | 10-12 | 7 | 59 | 66 | Customized |
| 9 | B | 18 | 5 | 62 | 67 | Save on groceries for family |
| 10 | B | 14 | 5 | 66 | 71 | Baby Stuff |
| 11 | B | 13 | 7 | 68 | 75 | Lady of The House, Back to School |
| 12 | B | 15 | 5 | 68 | 73 | Breakfast |
| 13 | A | 10-12 | 7 | 72 | 79 | Customized |
| 14 | C | 26 | 9 | 76 | 85 | Lady of the House, Take Care of Self and Family |
| 15 | C | 2 | 9 | 78 | 87 | Cat Food |
| 16 | B | 13 | 5 | 80 | 85 | Lady of the House, Personal Hygiene and Makeup |
| 17 | B | 19 | 5 | 82 | 87 | Save on groceries for family |
| 18 | A | 10-12 | 8 | 84 | 92 | Customized |
| 19 | B | 11 | 5 | 86 | 91 | Baby Stuff |
| 20 | C | 24 | 10 | 88 | 98 | Lady of the House, Take Care of Self and Family |
| 21 | B | 16 | 5 | 89 | 94 | Save on groceries for family |
| 22 | B | 21 | 5 | 89 | 94 | Save on groceries for family |
| 23 | B | 18 | 5 | 93 | 98 | Save on groceries for family |
| 24 | B | 2 | 8 | 94 | 102 | Cat and Dog Owner |
| 25 | B | 17 | 5 | 94 | 99 | Save on Groceries for Family (Hispanic?) |
| 26 | A | 10-12 | 6 | 32 | 38 | Customized |
| 27 | C | 27 | 9 | 34 | 43 | Lady of the House, Take Care of Self and Family |
| 28 | B | 28 | 9 | 37 | 46 | Save on groceries for family |
| 29 | B | 33 | 8 | 40 | 48 | Save on groceries for family |
| 30 | A | 10-12 | 7 | 46 | 53 | Customized |