# ${\bf Lab\ Notebook\ for:}$ ${\bf beer Ethnicity Consumption Brand Choice}$

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## $S1.beer\_2010DataCleaning$ - Process raw beer data

Algorithm name: S1.beer\_2010DataCleaning(save\_2010\_main\_data = 'all\_formats', out\_algoRunTime = T)

Algorithm run time: 33.2137923 minute(s).

## ${\bf S2.construct\_2010}$ market Data - Partition the cleaned data by city

```
Algorithm name: S2.construct_2010marketData(input_fileType = 'feather', marketNames = c('all'), out_algoRunTime = T)

Algorithm run time: 3.2091913 minute(s).
```

## $S3.explore\_2010marketData$ - Explore the completeness of the data

This algorithm takes city level data and determines, by brand, if there are any weeks over a 52 week period (one year) that a brand is missing in the data. If there are missing weeks in the data it is impossible to tell if there were no sales of a particular brand during that week or if the brand was not offered for sale. All we can see is that the week is missing data. Further, this algorithm determines the completeness of the data at the chain level. The same problem occurs when evaluating missing data at the chain level. It is not possible to say why the data is missing, simply that the data is missing.

The output of the algorithm presents a data file called:  $D3.explore\_2010marketData.rds$ 

This files contains information on missingness in the data by city / brand / week / chain.

Several data frames are contained in the list.

- BrandsOnly\_CompleteData\_wks: contains a list of brands with complete data over all 52 weeks.
- explore\_Data\_Complete\_wks: contains the raw data.frame for the brands with complete data over all 52 weeks.
- Brands\_CompleteData\_wksANDChains: contains a list of brands with complete data over all 52 weeks and complete data over all chains in the city. The number of chains is variable depending on the city.
- explore\_Data\_Complete\_wksANDChains: contains the raw data.frame for the brands with complete data over all 52 weeks and chains with complete data over all chains.
- explore\_Data: contains the complete raw data.frame used to obtain the above filtered results.

Algorithm name: S3.explore\_2010marketData(out\_algoRunTime = T)

Algorithm run time: 3.0931297 minute(s).

### $S4.allBrands\_2010$ analysis -

```
Algorithm name: S4.allBrands_2010analysis(brands= c("CHICAGO", "DALLAS, TX", "LOS ANGELES", "SPOKANE", "SYRACUSE", "HOUSTON"), out_algoRunTime = T )
```

Algorithm run time: 0.0076146 minute(s).

 $S5.aggregate\_allBrands\_2010$  -

City Data:

#### **CHICAGO**

Algorithm run time: 0.9425799 minute(s).

prcntBrandRep\_units: 76.1677326%.
prcntBrandRep\_dol: 79.7331841%.
prcntBrandRep\_gal: 83.8276386%.
prcntFirmRep\_units: 93.2128207%.
prcntFirmRep\_dol: 93.6344766%.
prcntFirmRep\_gal: 96.1166734%.

prcntConglomerateRep\_units: 93.4637987%. prcntConglomerateRep\_dol: 93.8386745%. prcntConglomerateRep\_gal: 96.2340386%.

Table 1: Aggregate Conglomerate Data for CHICAGO

|    | Conglomerates            | UNITS   | DOLLARS     | total_gal   |
|----|--------------------------|---------|-------------|-------------|
| 1  | SABMILLER                | 1341061 | 12858494.13 | 1919373.805 |
| 2  | ANHEUSER-BUSCH INBEV     | 703186  | 6592746.34  | 929321.930  |
| 3  | CONSTELLATION BRANDS INC | 320397  | 3689692.35  | 332339.297  |
| 4  | HEINEKEN USA INC         | 223202  | 2317296.07  | 204782.828  |
| 5  | S & P COMPANY            | 95268   | 767591.99   | 131722.266  |
| 6  | DIAGEO                   | 90385   | 800058.38   | 60240.594   |
| 8  | BOSTON BEER CO           | 74781   | 794918.76   | 66500.641   |
| 9  | MARK ANTHONY BRANDS INC  | 73022   | 719802.50   | 51868.125   |
| 11 | SIERRA NEVADA BREWING CO | 17230   | 188197.02   | 13167.656   |
| 20 | E & J GALLO WNRY         | 2670    | 21262.27    | 1499.062    |

Note:

Number of Conglomerates: 10

Table 2: Aggregate Firm Data for CHICAGO

|   | Firms                 | UNITS   | DOLLARS     | $total\_gal$ |
|---|-----------------------|---------|-------------|--------------|
| 1 | MILLERCOORS           | 1211060 | 11517961.02 | 1805195.477  |
| 2 | ANHEUSER-BUSCH INBEV  | 666259  | 6273777.01  | 890461.148   |
| 3 | CROWN IMPORTS         | 320397  | 3689692.35  | 332339.297   |
| 4 | HEINEKEN USA INC      | 223202  | 2317296.07  | 204782.828   |
| 5 | TENTH & BLAKE BEER CO | 130001  | 1340533.11  | 114178.328   |

| 6  | PABST BREWING CO         | 95268 | 767591.99 | 131722.266 |
|----|--------------------------|-------|-----------|------------|
| 7  | DIAGEO GUINNESS USA      | 82487 | 737496.75 | 55714.953  |
| 9  | BOSTON BEER CO           | 74781 | 794918.76 | 66500.641  |
| 10 | MARK ANTHONY BRANDS INC  | 73022 | 719802.50 | 51868.125  |
| 11 | MICHELOB BREWING CO      | 36927 | 318969.33 | 38860.781  |
| 13 | SIERRA NEVADA BREWING CO | 17230 | 188197.02 | 13167.656  |
| 23 | E & J GALLO WNRY         | 2670  | 21262.27  | 1499.062   |

Number of Conglomerates: 10

Table 3: Aggregate Brand Data for CHICAGO

|    | Brands                        | UNITS  | DOLLARS    | total_gal   |
|----|-------------------------------|--------|------------|-------------|
| 1  | MILLER LITE                   | 513772 | 5563091.56 | 840811.6875 |
| 2  | BUD LIGHT                     | 214515 | 2269587.47 | 338383.8125 |
| 3  | CORONA EXTRA                  | 167318 | 1930201.41 | 176218.2656 |
| 4  | COORS LIGHT                   | 133061 | 1492072.15 | 226284.3750 |
| 5  | MILLER GENUINE DRAFT          | 132885 | 1260618.66 | 183935.3750 |
| 6  | BUDWEISER                     | 126866 | 1154621.76 | 168268.1250 |
| 7  | MILLER HIGH LIFE              | 115827 | 1013147.98 | 198003.5625 |
| 8  | HEINEKEN                      | 107693 | 1172537.88 | 99689.8594  |
| 9  | MODELO ESPECIAL               | 79514  | 898638.77  | 81288.7500  |
| 10 | MILLER GENUINE DRAFT LIGHT 64 | 65706  | 708916.38  | 106581.9375 |
| 11 | ICEHOUSE                      | 58526  | 385122.27  | 71708.3125  |
| 12 | BUSCH LIGHT                   | 52330  | 557267.29  | 116339.8125 |
| 13 | CORONA LIGHT                  | 45439  | 515927.62  | 46569.9375  |
| 14 | BUSCH                         | 44881  | 373276.49  | 75306.1875  |
| 16 | BLUE MOON BELGIAN WHITE ALE   | 35520  | 364205.64  | 29579.7500  |
| 18 | STELLA ARTOIS LAGER           | 31406  | 367912.87  | 26216.1016  |
| 21 | BUD LIGHT LIME                | 27644  | 260709.77  | 24785.8594  |
| 22 | PABST BLUE RIBBON             | 26540  | 253936.60  | 48990.5625  |
| 23 | GUINNESS DRAUGHT              | 25835  | 249137.71  | 18565.9062  |
| 24 | TECATE                        | 25571  | 248155.13  | 29058.8125  |
| 25 | SAMUEL ADAMS SEASONAL         | 25401  | 266005.13  | 22169.1719  |
| 26 | BECKS                         | 25206  | 256068.80  | 22508.4375  |
| 27 | HEINEKEN PREMIUM LIGHT LAGER  | 22964  | 272217.95  | 22651.8828  |
| 28 | MICHELOB ULTRA                | 22643  | 194070.37  | 24943.8750  |
| 30 | SAMUEL ADAMS BOSTON LAGER     | 21899  | 231142.51  | 19720.4062  |
| 35 | FOSTERS LAGER                 | 18848  | 65355.29   | 5778.2266   |
| 40 | ODOULS                        | 14893  | 96729.46   | 12209.6250  |
| 41 | MIKES HARD LEMONADE           | 14618  | 144903.91  | 10632.1250  |
| 44 | SIERRA NEVADA PALE ALE        | 12767  | 140917.46  | 10002.2812  |
| 45 | ROLLING ROCK EXTRA PALE       | 12027  | 114186.01  | 12163.8750  |
| 48 | RED STRIPE                    | 11791  | 88735.21   | 6543.3516   |
| 49 | NEWCASTLE BROWN ALE           | 11416  | 124317.39  | 9319.4609   |
| 50 | BLUE MOON SEASONAL COLLECTION | 11083  | 110675.70  | 8778.3750   |
| 57 | GUINNESS EXTRA STOUT          | 9967   | 73609.97   | 5361.7969   |
| 58 | NEGRA MODELO                  | 9886   | 108652.49  | 8704.8750   |

| 59  | MILLER CHILL                  | 9631 | 75513.07 | 8915.6250  |
|-----|-------------------------------|------|----------|------------|
| 60  | MIKES HARD CRANBERRY LEMONADE | 8858 | 86867.06 | 6257.6797  |
| 61  | COORS                         | 8758 | 99598.51 | 15621.7500 |
| 62  | NATURAL ICE                   | 8375 | 58195.68 | 11723.0625 |
| 70  | KEYSTONE LIGHT                | 6739 | 85668.46 | 18833.2500 |
| 71  | BUD LIGHT GOLDEN WHEAT        | 6513 | 60730.89 | 5654.2500  |
| 74  | MIKES HARD SEASONAL           | 6204 | 54444.63 | 3879.8047  |
| 75  | SMIRNOFF ICE                  | 6177 | 52095.94 | 3936.7109  |
| 78  | MIKES HARD LIGHT LEMONADE     | 5676 | 54972.06 | 3882.3359  |
| 84  | SMIRNOFF ICE PARTY PACK       | 5495 | 67279.16 | 5752.5781  |
| 86  | SAINT PAULI GIRL              | 5103 | 56195.11 | 5158.5000  |
| 89  | GEORGE KILLIANS IRISH RED LAG | 4854 | 49350.13 | 4457.6250  |
| 94  | ODOULS AMBER                  | 4712 | 22462.29 | 2650.5000  |
| 99  | BACARDI SILVER MOJITO         | 4414 | 31121.06 | 2482.8750  |
| 102 | LANDSHARK LAGER               | 4039 | 35863.90 | 2977.8750  |
| 103 | SHOCK TOP BELGIAN WHITE ALE   | 4018 | 29929.89 | 2450.3438  |
| 113 | SMIRNOFF ICE RASPBERRY BURST  | 3219 | 24231.18 | 1684.9453  |
| 118 | SMIRNOFF ICE GREEN APPLE BITE | 2583 | 19221.26 | 1352.0391  |
| 121 | DOS EQUIS XX AMBAR LAGER      | 2361 | 28237.74 | 2511.5625  |
| 131 | MICHELOB AMBER BOCK           | 2025 | 19924.78 | 2036.2500  |
| 133 | NATURAL LIGHT                 | 1993 | 22733.25 | 5027.0625  |
| 144 | MICHELOB ULTRA AMBER          | 1679 | 13861.68 | 1812.9375  |
| 149 | MIKES HARD MANGO PUNCH        | 1510 | 12176.94 | 790.3906   |
| 154 | MICHELOB ULTRA LIME CACTUS    | 1366 | 7969.91  | 768.3750   |
| 163 | MICHELOB ULTR POMEGRANAT RSPB | 1183 | 6954.70  | 665.4375   |
| 171 | MOLSON CANADIAN               | 1027 | 8695.54  | 1036.1250  |
| 177 | HORNSBYS AMBER DRAFT          | 939  | 7490.31  | 528.1875   |
| 198 | MILWAUKEES BEST               | 622  | 5570.19  | 1170.5625  |
| 201 | WILD BLUE                     | 583  | 4426.37  | 327.9375   |
|     |                               |      |          |            |

Number of Conglomerates: 10 Number of firms: 12

Number of Brands: 64

#### DALLAS, TX

Algorithm run time: 0.8903018 minute(s).

prcntBrandRep\_units: 77.3324622%.
prcntBrandRep\_dol: 82.2188882%.
prcntBrandRep\_gal: 84.7795074%.
prcntFirmRep\_units: 91.2448634%.
prcntFirmRep\_dol: 92.4068525%.
prcntFirmRep\_gal: 94.2156599%.

prcntConglomerateRep\_units: 91.611992%. prcntConglomerateRep\_dol: 92.6923266%. prcntConglomerateRep\_gal: 94.4031074%.

Table 4: Aggregate Conglomerate Data for DALLAS, TX

|    | Conglomerates            | UNITS  | DOLLARS    | total_gal  |
|----|--------------------------|--------|------------|------------|
| 1  | ANHEUSER-BUSCH INBEV     | 688219 | 6790446.22 | 732432.953 |
| 2  | SABMILLER                | 590613 | 6474931.16 | 717953.281 |
| 3  | HEINEKEN USA INC         | 111980 | 1159499.73 | 92121.086  |
| 4  | CONSTELLATION BRANDS INC | 109039 | 1169835.79 | 91547.211  |
| 6  | DIAGEO                   | 50060  | 374340.07  | 24842.922  |
| 7  | BOSTON BEER CO           | 24117  | 234265.39  | 17253.688  |
| 8  | MARK ANTHONY BRANDS INC  | 18967  | 161480.19  | 9855.641   |
| 9  | S & P COMPANY            | 16844  | 124785.47  | 15563.188  |
| 11 | SIERRA NEVADA BREWING CO | 7983   | 75761.25   | 5438.156   |
| 19 | E & J GALLO WNRY         | 3167   | 24954.52   | 1781.438   |

Note:

Number of Conglomerates: 10

Table 5: Aggregate Firm Data for DALLAS, TX

|   | Firms                | UNITS  | DOLLARS    | total_gal  |
|---|----------------------|--------|------------|------------|
| 1 | ANHEUSER-BUSCH INBEV | 628160 | 6119184.40 | 672328.453 |
| 2 | MILLERCOORS          | 563441 | 6235040.50 | 700044.406 |
| 3 | HEINEKEN USA INC     | 111980 | 1159499.73 | 92121.086  |
| 4 | CROWN IMPORTS        | 109039 | 1169835.79 | 91547.211  |
| 6 | MICHELOB BREWING CO  | 60059  | 671261.82  | 60104.500  |

| 7  | DIAGEO GUINNESS USA      | 43564 | 323245.22 | 21449.938 |
|----|--------------------------|-------|-----------|-----------|
| 8  | TENTH & BLAKE BEER CO    | 27172 | 239890.66 | 17908.875 |
| 9  | BOSTON BEER CO           | 24117 | 234265.39 | 17253.688 |
| 10 | MARK ANTHONY BRANDS INC  | 18967 | 161480.19 | 9855.641  |
| 11 | PABST BREWING CO         | 16844 | 124785.47 | 15563.188 |
| 13 | SIERRA NEVADA BREWING CO | 7983  | 75761.25  | 5438.156  |
| 21 | E & J GALLO WNRY         | 3167  | 24954.52  | 1781.438  |

Number of Conglomerates: 10

Table 6: Aggregate Brand Data for DALLAS, TX

|    | Brands                        | UNITS  | DOLLARS    | total_gal   |
|----|-------------------------------|--------|------------|-------------|
| 1  | BUD LIGHT                     | 230647 | 3021591.69 | 328123.2969 |
| 2  | MILLER LITE                   | 168370 | 2250876.03 | 244095.2500 |
| 3  | COORS LIGHT                   | 156719 | 2060687.09 | 223288.6406 |
| 4  | NATURAL LIGHT                 | 145116 | 698813.33  | 101012.2500 |
| 5  | BUDWEISER                     | 74386  | 919542.14  | 99608.0938  |
| 6  | KEYSTONE LIGHT                | 62288  | 648020.41  | 85787.3125  |
| 7  | CORONA EXTRA                  | 57793  | 661677.78  | 50638.8828  |
| 9  | MICHELOB ULTRA                | 40841  | 513799.36  | 46778.6875  |
| 10 | HEINEKEN                      | 40471  | 435514.52  | 33137.1250  |
| 11 | MILLER HIGH LIFE              | 36562  | 273401.65  | 34161.8750  |
| 14 | BUD LIGHT LIME                | 25411  | 262896.80  | 22486.3281  |
| 15 | MODELO ESPECIAL               | 20950  | 200882.42  | 17446.5938  |
| 16 | FOSTERS LAGER                 | 18721  | 50955.69   | 4456.1953   |
| 17 | CORONA LIGHT                  | 16460  | 193162.17  | 14916.1875  |
| 18 | COORS                         | 16383  | 229961.43  | 25076.5625  |
| 19 | BUSCH                         | 16334  | 158208.29  | 20229.3750  |
| 20 | TECATE                        | 15874  | 141072.98  | 13134.2500  |
| 21 | MILLER GENUINE DRAFT LIGHT 64 | 15614  | 187587.72  | 19626.2500  |
| 22 | BLUE MOON BELGIAN WHITE ALE   | 14008  | 127876.45  | 9937.8438   |
| 25 | MILLER GENUINE DRAFT          | 11251  | 132785.29  | 13909.8750  |
| 27 | GUINNESS EXTRA STOUT          | 9492   | 52869.28   | 3407.2188   |
| 28 | SMIRNOFF ICE                  | 9440   | 65500.84   | 4489.6641   |
| 31 | BUSCH LIGHT                   | 8534   | 125843.40  | 16472.4375  |
| 33 | MILWAUKEES BEST               | 8253   | 37597.96   | 5415.8125   |
| 34 | SAMUEL ADAMS SEASONAL         | 8227   | 77807.61   | 5782.2188   |
| 35 | STELLA ARTOIS LAGER           | 7881   | 65523.04   | 4004.6094   |
| 37 | ODOULS                        | 7336   | 50993.29   | 4897.6875   |
| 38 | SAMUEL ADAMS BOSTON LAGER     | 7090   | 72688.79   | 5604.7969   |
| 39 | MILLER CHILL                  | 7047   | 49278.32   | 4994.4375   |
| 40 | HEINEKEN PREMIUM LIGHT LAGER  | 6806   | 83025.99   | 6205.5234   |
| 41 | GUINNESS DRAUGHT              | 6659   | 55585.96   | 3405.6953   |
| 44 | NEGRA MODELO                  | 6050   | 46833.28   | 3396.8438   |
| 45 | BECKS                         | 5789   | 57791.53   | 4397.3438   |
| 47 | MICHELOB ULTRA LIME CACTUS    | 5616   | 38365.78   | 3170.2500   |
| 49 | DOS EQUIS XX AMBAR LAGER      | 5506   | 54953.18   | 4402.3125   |

| 52  | BLUE MOON SEASONAL COLLECTION | 5228 | 45797.12 | 3488.6250 |
|-----|-------------------------------|------|----------|-----------|
| 56  | SIERRA NEVADA PALE ALE        | 4898 | 50276.72 | 3702.9375 |
|     | ROLLING ROCK EXTRA PALE       | 4613 |          |           |
| 58  |                               | -0-0 | 44441.66 | 3704.0625 |
| 59  | MIKES HARD LEMONADE           | 4370 | 36444.97 | 2280.5781 |
| 60  | RED STRIPE                    | 4353 | 39085.90 | 2799.1562 |
| 62  | BACARDI SILVER MOJITO         | 4100 | 29990.16 | 2325.9375 |
| 65  | NEWCASTLE BROWN ALE           | 3945 | 39495.27 | 2727.3750 |
| 69  | NATURAL ICE                   | 3607 | 9132.19  | 1318.6875 |
| 70  | LANDSHARK LAGER               | 3580 | 31177.73 | 2155.9688 |
| 74  | BUD LIGHT GOLDEN WHEAT        | 3304 | 28691.01 | 2390.7188 |
| 77  | SAINT PAULI GIRL              | 3119 | 28776.96 | 2356.6875 |
| 79  | GEORGE KILLIANS IRISH RED LAG | 3030 | 21832.42 | 1750.9688 |
| 80  | MIKES HARD CRANBERRY LEMONADE | 3022 | 25348.00 | 1578.3281 |
| 81  | SMIRNOFF ICE GREEN APPLE BITE | 2846 | 22728.31 | 1485.7656 |
| 84  | MICHELOB ULTRA AMBER          | 2602 | 25102.31 | 2190.3750 |
| 87  | MIKES HARD LIGHT LEMONADE     | 2225 | 18622.04 | 1163.3359 |
| 90  | MICHELOB ULTR POMEGRANAT RSPB | 2150 | 14673.36 | 1209.3750 |
| 96  | MIKES HARD SEASONAL           | 1916 | 16117.31 | 999.4062  |
| 102 | ODOULS AMBER                  | 1736 | 10077.84 | 976.5000  |
| 104 | SHOCK TOP BELGIAN WHITE ALE   | 1686 | 12269.64 | 934.7812  |
| 107 | HORNSBYS AMBER DRAFT          | 1568 | 12321.92 | 882.0000  |
| 123 | MOLSON CANADIAN               | 1137 | 7925.91  | 633.0000  |
| 128 | ICEHOUSE                      | 1092 | 6254.66  | 757.6875  |
| 139 | MICHELOB AMBER BOCK           | 947  | 6236.92  | 532.6875  |
| 140 | PABST BLUE RIBBON             | 897  | 7262.43  | 873.3750  |
| 161 | SMIRNOFF ICE RASPBERRY BURST  | 703  | 5561.53  | 366.2266  |
| 164 | MIKES HARD MANGO PUNCH        | 689  | 6149.46  | 360.6484  |
| 178 | WILD BLUE                     | 578  | 3859.88  | 268.4062  |
| 190 | SMIRNOFF ICE PARTY PACK       | 460  | 6113.00  | 481.5625  |
|     |                               |      |          |           |

Number of Conglomerates: 10 Number of firms: 12

Number of Brands: 64

#### LOS ANGELES

Algorithm name: S5.aggregate\_allBrands\_2010(Market = 'LOS ANGELES', figurePlot = T, screenPlot = F, saveData = T, out\_algoRunTime = T)

Algorithm run time: 1.0483849 minute(s).

prcntBrandRep\_units: 77.0727747%.
prcntBrandRep\_dol: 84.7507023%.
prcntBrandRep\_gal: 87.9963238%.
prcntFirmRep\_units: 93.7981803%.
prcntFirmRep\_dol: 95.0556918%.
prcntFirmRep\_gal: 96.6291576%.

prcntConglomerateRep\_units: 93.9920792%. prcntConglomerateRep\_dol: 95.211931%. prcntConglomerateRep\_gal: 96.7226944%.

Table 7: Aggregate Conglomerate Data for LOS ANGELES

|    | Conglomerates            | UNITS   | DOLLARS    | total_gal   |
|----|--------------------------|---------|------------|-------------|
| 1  | ANHEUSER-BUSCH INBEV     | 2312404 | 21939373.3 | 2799738.984 |
| 2  | SABMILLER                | 1812508 | 15887443.3 | 2036640.008 |
| 3  | CONSTELLATION BRANDS INC | 856901  | 10765375.0 | 957208.625  |
| 4  | HEINEKEN USA INC         | 746544  | 8697290.7  | 877301.711  |
| 5  | DIAGEO                   | 182734  | 1596629.3  | 112464.406  |
| 6  | S & P COMPANY            | 96285   | 578212.1   | 82226.703   |
| 7  | BOSTON BEER CO           | 92534   | 1101914.4  | 86895.062   |
| 9  | MARK ANTHONY BRANDS INC  | 60275   | 548868.4   | 37774.922   |
| 12 | SIERRA NEVADA BREWING CO | 46971   | 559050.5   | 39619.531   |
| 16 | E & J GALLO WNRY         | 17492   | 120239.9   | 9837.375    |

Note:

Number of Conglomerates: 10

Table 8: Aggregate Firm Data for LOS ANGELES

|   | Firms                | UNITS   | DOLLARS    | total_gal   |
|---|----------------------|---------|------------|-------------|
| 1 | ANHEUSER-BUSCH INBEV | 2214862 | 20839170.9 | 2690161.172 |
| 2 | MILLERCOORS          | 1701184 | 14659981.6 | 1947801.477 |
| 3 | CROWN IMPORTS        | 856901  | 10765375.0 | 957208.625  |
| 4 | HEINEKEN USA INC     | 746544  | 8697290.7  | 877301.711  |
| 5 | DIAGEO GUINNESS USA  | 169893  | 1495227.0  | 105656.578  |

| 6  | TENTH & BLAKE BEER CO    | 111324 | 1227461.7 | 88838.531  |
|----|--------------------------|--------|-----------|------------|
| 7  | MICHELOB BREWING CO      | 97542  | 1100202.4 | 109577.812 |
| 8  | PABST BREWING CO         | 96285  | 578212.1  | 82226.703  |
| 9  | BOSTON BEER CO           | 92534  | 1101914.4 | 86895.062  |
| 11 | MARK ANTHONY BRANDS INC  | 60275  | 548868.4  | 37774.922  |
| 13 | SIERRA NEVADA BREWING CO | 46971  | 559050.5  | 39619.531  |
| 18 | E & J GALLO WNRY         | 17492  | 120239.9  | 9837.375   |

Number of Conglomerates: 10

Table 9: Aggregate Brand Data for LOS ANGELES

|    | Brands                        | UNITS  | DOLLARS     | total_gal    |
|----|-------------------------------|--------|-------------|--------------|
| 1  | BUD LIGHT                     | 933273 | 11044113.32 | 1488125.8438 |
| 2  | COORS LIGHT                   | 531178 | 6862469.26  | 915918.0625  |
| 3  | CORONA EXTRA                  | 490471 | 6638813.26  | 592693.0781  |
| 4  | BUDWEISER                     | 399984 | 3984387.71  | 527571.3125  |
| 5  | MILLER HIGH LIFE              | 314480 | 958931.97   | 131884.5000  |
| 6  | TECATE                        | 235428 | 2520045.03  | 335289.4375  |
| 7  | HEINEKEN                      | 213422 | 2615650.28  | 227537.1953  |
| 8  | MILLER LITE                   | 211346 | 2583771.07  | 340688.9375  |
| 10 | MODELO ESPECIAL               | 164422 | 1560729.10  | 144407.4375  |
| 11 | MILLER GENUINE DRAFT          | 121677 | 1362894.86  | 173424.7500  |
| 13 | NATURAL LIGHT                 | 107991 | 1162147.56  | 206199.7500  |
| 14 | FOSTERS LAGER                 | 105524 | 260504.90   | 24028.6172   |
| 15 | NEWCASTLE BROWN ALE           | 103674 | 1201986.85  | 96043.0938   |
| 18 | CORONA LIGHT                  | 73293  | 973378.07   | 80844.9375   |
| 19 | BLUE MOON BELGIAN WHITE ALE   | 70158  | 776619.40   | 57618.1250   |
| 21 | BUD LIGHT LIME                | 65087  | 640553.00   | 59940.7500   |
| 22 | STELLA ARTOIS LAGER           | 64439  | 793741.68   | 54995.8516   |
| 23 | MICHELOB ULTRA                | 62634  | 756570.22   | 81132.2812   |
| 24 | KEYSTONE LIGHT                | 58782  | 694769.59   | 125996.2500  |
| 26 | COORS                         | 58329  | 665554.60   | 91456.1250   |
| 29 | PABST BLUE RIBBON             | 46375  | 353214.17   | 50669.1875   |
| 30 | NATURAL ICE                   | 43407  | 474134.08   | 81592.3125   |
| 31 | HEINEKEN PREMIUM LIGHT LAGER  | 36777  | 485565.31   | 41433.3594   |
| 33 | SMIRNOFF ICE                  | 35864  | 262449.92   | 19023.3125   |
| 34 | BUSCH                         | 35405  | 72611.99    | 10613.4375   |
| 35 | GUINNESS DRAUGHT              | 34665  | 356564.05   | 23279.6094   |
| 38 | ODOULS                        | 33550  | 258847.85   | 25107.2812   |
| 39 | BECKS                         | 33409  | 401124.92   | 35138.8438   |
| 40 | SIERRA NEVADA PALE ALE        | 31443  | 385096.93   | 27818.7500   |
| 41 | SAMUEL ADAMS SEASONAL         | 30795  | 362257.81   | 28514.9219   |
| 42 | SAMUEL ADAMS BOSTON LAGER     | 30604  | 356609.60   | 28636.9688   |
| 43 | RED STRIPE                    | 29814  | 248391.60   | 18080.8516   |
| 44 | MILLER GENUINE DRAFT LIGHT 64 | 28742  | 389838.87   | 46699.9688   |
| 48 | NEGRA MODELO                  | 22930  | 255060.01   | 19454.4375   |
| 50 | BLUE MOON SEASONAL COLLECTION | 18976  | 223289.94   | 15912.0000   |

| 54         SMIRNOFF ICE PARTY PACK         15652         205986.90         16385.6875           55         SHOCK TOP BELGIAN WHITE ALE         15596         150618.44         11324.7188           58         DOS EQUIS XX AMBAR LAGER         15316         186171.93         16175.2500           59         BUD LIGHT GOLDEN WHEAT         14729         149588.96         13220.2500           60         ICEHOUSE         14312         22330.54         2683.5000           61         SMIRNOFF ICE GREEN APPLE BITE         13861         91766.49         6168.2734           63         GUINNESS EXTRA STOUT         12665         101338.41         6372.1094           66         SAINT PAULI GIRL         12231         109166.82         10301.6250           67         MIKES HARD LEMONADE         11916         121208.03         8425.7734           80         GEORGE KILLIANS IRISH RED LAG         8653         61160.79         4867.3125           84         SMIRNOFF ICE RASPBERRY BURST         8311         65694.02         4350.2891           92         ODOULS AMBER         6201         37480.50         3488.0625           97         HORNSBYS AMBER DRAFT         5875         40276.98         3302.8125           101 | 52  | ROLLING ROCK EXTRA PALE       | 17992 | 188437.00 | 17301.1875 |
|---|-----|-------------------------------|-------|-----------|------------|
| 58         DOS EQUIS XX AMBAR LAGER         15316         186171.93         16175.2500           59         BUD LIGHT GOLDEN WHEAT         14729         149588.96         13220.2500           60         ICEHOUSE         14312         22330.54         2683.5000           61         SMIRNOFF ICE GREEN APPLE BITE         13861         91766.49         6168.2734           63         GUINNESS EXTRA STOUT         12665         101338.41         6372.1094           66         SAINT PAULI GIRL         12231         109166.82         10301.6250           67         MIKES HARD LEMONADE         11916         121208.03         8425.7734           80         GEORGE KILLIANS IRISH RED LAG         8653         61160.79         4867.3125           84         SMIRNOFF ICE RASPBERRY BURST         8311         65694.02         4350.2891           92         ODOULS AMBER         6201         37480.50         3488.0625           97         HORNSBYS AMBER DRAFT         5875         40276.98         3302.8125           101         MILWAUKEES BEST         5754         86107.48         15879.3750           102         MILLER CHILL         5662         52744.74         5300.4375           103         MICHELOB AMBER    | 54  | SMIRNOFF ICE PARTY PACK       | 15652 | 205986.90 | 16385.6875 |
| 59         BUD LIGHT GOLDEN WHEAT         14729         149588.96         13220.2500           60         ICEHOUSE         14312         22330.54         2683.5000           61         SMIRNOFF ICE GREEN APPLE BITE         13861         91766.49         6168.2734           63         GUINNESS EXTRA STOUT         12665         101338.41         6372.1094           66         SAINT PAULI GIRL         12231         109166.82         10301.6250           67         MIKES HARD LEMONADE         11916         121208.03         8425.7734           80         GEORGE KILLIANS IRISH RED LAG         8653         61160.79         4867.3125           84         SMIRNOFF ICE RASPBERRY BURST         8311         65694.02         4350.2891           92         ODOULS AMBER         6201         37480.50         3488.0625           97         HORNSBYS AMBER DRAFT         5875         40276.98         3302.8125           101         MILWAUKEES BEST         5754         86107.48         15879.3750           102         MILLER CHILL         5662         52744.74         5300.4375           104         LANDSHARK LAGER         5495         49040.46         3534.1875           105         MICHELOB AMBER BOCK          | 55  | SHOCK TOP BELGIAN WHITE ALE   | 15596 | 150618.44 | 11324.7188 |
| 60ICEHOUSE1431222330.542683.500061SMIRNOFF ICE GREEN APPLE BITE1386191766.496168.273463GUINNESS EXTRA STOUT12665101338.416372.109466SAINT PAULI GIRL12231109166.8210301.625067MIKES HARD LEMONADE11916121208.038425.773480GEORGE KILLIANS IRISH RED LAG865361160.794867.312584SMIRNOFF ICE RASPBERRY BURST831165694.024350.289192ODOULS AMBER620137480.503488.062597HORNSBYS AMBER DRAFT587540276.983302.8125101MILWAUKEES BEST575486107.4815879.3750102MILLER CHILL566252744.745300.4375104LANDSHARK LAGER549549040.463534.1875105MICHELOB AMBER BOCK545663777.225563.6875107MIKES HARD SEASONAL538848953.933267.8203112MIKES HARD CRANBERRY LEMONADE483240218.302525.7500134BACARDI SILVER MOJITO367131979.472062.1250137MICHELOB ULTRA AMBER344840523.823794.0625148MIKES HARD LIGHT LEMONADE234518694.981227.4609150MOLSON CANADIAN220827934.242476.7812151WILD BLUE218418492.021228.5000155MICHELOB ULTRA LIME CACTUS203714164.511145.8125 <td>58</td> <td>DOS EQUIS XX AMBAR LAGER</td> <td>15316</td> <td>186171.93</td> <td>16175.2500</td>   | 58  | DOS EQUIS XX AMBAR LAGER      | 15316 | 186171.93 | 16175.2500 |
| 61         SMIRNOFF ICE GREEN APPLE BITE         13861         91766.49         6168.2734           63         GUINNESS EXTRA STOUT         12665         101338.41         6372.1094           66         SAINT PAULI GIRL         12231         109166.82         10301.6250           67         MIKES HARD LEMONADE         11916         121208.03         8425.7734           80         GEORGE KILLIANS IRISH RED LAG         8653         61160.79         4867.3125           84         SMIRNOFF ICE RASPBERRY BURST         8311         65694.02         4350.2891           92         ODOULS AMBER         6201         37480.50         3488.0625           97         HORNSBYS AMBER DRAFT         5875         40276.98         3302.8125           101         MILWAUKEES BEST         5754         86107.48         15879.3750           102         MILLER CHILL         5662         52744.74         5300.4375           104         LANDSHARK LAGER         5495         49040.46         3534.1875           105         MICHELOB AMBER BOCK         5456         63777.22         5563.6875           107         MIKES HARD CRANBERRY LEMONADE         4832         48953.93         3267.8203           112         MIKES HAR    | 59  | BUD LIGHT GOLDEN WHEAT        | 14729 | 149588.96 | 13220.2500 |
| 63         GUINNESS EXTRA STOUT         12665         101338.41         6372.1094           66         SAINT PAULI GIRL         12231         109166.82         10301.6250           67         MIKES HARD LEMONADE         11916         121208.03         8425.7734           80         GEORGE KILLIANS IRISH RED LAG         8653         61160.79         4867.3125           84         SMIRNOFF ICE RASPBERRY BURST         8311         65694.02         4350.2891           92         ODOULS AMBER         6201         37480.50         3488.0625           97         HORNSBYS AMBER DRAFT         5875         40276.98         3302.8125           101         MILWAUKEES BEST         5754         86107.48         15879.3750           102         MILLER CHILL         5662         52744.74         5300.4375           104         LANDSHARK LAGER         5495         49040.46         3534.1875           105         MICHELOB AMBER BOCK         5456         63777.22         5563.6875           107         MIKES HARD SEASONAL         5388         48953.93         3267.8203           112         MIKES HARD CRANBERRY LEMONADE         4832         40218.30         2525.7500           134         BACARDI SILVER MOJI    | 60  | ICEHOUSE                      | 14312 | 22330.54  | 2683.5000  |
| 66SAINT PAULI GIRL12231109166.8210301.625067MIKES HARD LEMONADE11916121208.038425.773480GEORGE KILLIANS IRISH RED LAG865361160.794867.312584SMIRNOFF ICE RASPBERRY BURST831165694.024350.289192ODOULS AMBER620137480.503488.062597HORNSBYS AMBER DRAFT587540276.983302.8125101MILWAUKEES BEST575486107.4815879.3750102MILLER CHILL566252744.745300.4375104LANDSHARK LAGER549549040.463534.1875105MICHELOB AMBER BOCK545663777.225563.6875107MIKES HARD SEASONAL538848953.933267.8203112MIKES HARD CRANBERRY LEMONADE483240218.302525.7500134BACARDI SILVER MOJITO367131979.472062.1250137MICHELOB ULTRA AMBER344840523.823794.0625148MIKES HARD LIGHT LEMONADE234518694.981227.4609150MOLSON CANADIAN220827934.242476.7812151WILD BLUE218418492.021228.5000155MICHELOB ULTRA LIME CACTUS203714164.511145.8125164MIKES HARD MANGO PUNCH182115009.59953.1797188BUSCH LIGHT119916722.412918.4375   | 61  | SMIRNOFF ICE GREEN APPLE BITE | 13861 | 91766.49  | 6168.2734  |
| 67MIKES HARD LEMONADE11916121208.038425.773480GEORGE KILLIANS IRISH RED LAG865361160.794867.312584SMIRNOFF ICE RASPBERRY BURST831165694.024350.289192ODOULS AMBER620137480.503488.062597HORNSBYS AMBER DRAFT587540276.983302.8125101MILWAUKEES BEST575486107.4815879.3750102MILLER CHILL566252744.745300.4375104LANDSHARK LAGER549549040.463534.1875105MICHELOB AMBER BOCK545663777.225563.6875107MIKES HARD SEASONAL538848953.933267.8203112MIKES HARD CRANBERRY LEMONADE483240218.302525.7500134BACARDI SILVER MOJITO367131979.472062.1250137MICHELOB ULTRA AMBER344840523.823794.0625148MIKES HARD LIGHT LEMONADE234518694.981227.4609150MOLSON CANADIAN220827934.242476.7812151WILD BLUE218418492.021228.5000155MICHELOB ULTRA LIME CACTUS203714164.511145.8125164MIKES HARD MANGO PUNCH182115009.59953.1797188BUSCH LIGHT119916722.412918.4375   | 63  | GUINNESS EXTRA STOUT          | 12665 | 101338.41 | 6372.1094  |
| 80         GEORGE KILLIANS IRISH RED LAG         8653         61160.79         4867.3125           84         SMIRNOFF ICE RASPBERRY BURST         8311         65694.02         4350.2891           92         ODOULS AMBER         6201         37480.50         3488.0625           97         HORNSBYS AMBER DRAFT         5875         40276.98         3302.8125           101         MILWAUKEES BEST         5754         86107.48         15879.3750           102         MILLER CHILL         5662         52744.74         5300.4375           104         LANDSHARK LAGER         5495         49040.46         3534.1875           105         MICHELOB AMBER BOCK         5456         63777.22         5563.6875           107         MIKES HARD SEASONAL         5388         48953.93         3267.8203           112         MIKES HARD CRANBERRY LEMONADE         4832         40218.30         2525.7500           134         BACARDI SILVER MOJITO         3671         31979.47         2062.1250           137         MICHELOB ULTRA AMBER         3448         40523.82         3794.0625           148         MIKES HARD LIGHT LEMONADE         2345         18694.98         1227.4609           150         MOLSON CANAD    | 66  | SAINT PAULI GIRL              | 12231 | 109166.82 | 10301.6250 |
| 84       SMIRNOFF ICE RASPBERRY BURST       8311       65694.02       4350.2891         92       ODOULS AMBER       6201       37480.50       3488.0625         97       HORNSBYS AMBER DRAFT       5875       40276.98       3302.8125         101       MILWAUKEES BEST       5754       86107.48       15879.3750         102       MILLER CHILL       5662       52744.74       5300.4375         104       LANDSHARK LAGER       5495       49040.46       3534.1875         105       MICHELOB AMBER BOCK       5456       63777.22       5563.6875         107       MIKES HARD SEASONAL       5388       48953.93       3267.8203         112       MIKES HARD CRANBERRY LEMONADE       4832       40218.30       2525.7500         134       BACARDI SILVER MOJITO       3671       31979.47       2062.1250         137       MICHELOB ULTRA AMBER       3448       40523.82       3794.0625         148       MIKES HARD LIGHT LEMONADE       2345       18694.98       1227.4609         150       MOLSON CANADIAN       2208       27934.24       2476.7812         151       WILD BLUE       2184       18492.02       1228.5000         155       MICHELOB ULTRA LI  | 67  | MIKES HARD LEMONADE           | 11916 | 121208.03 | 8425.7734  |
| 92ODOULS AMBER620137480.503488.062597HORNSBYS AMBER DRAFT587540276.983302.8125101MILWAUKEES BEST575486107.4815879.3750102MILLER CHILL566252744.745300.4375104LANDSHARK LAGER549549040.463534.1875105MICHELOB AMBER BOCK545663777.225563.6875107MIKES HARD SEASONAL538848953.933267.8203112MIKES HARD CRANBERRY LEMONADE483240218.302525.7500134BACARDI SILVER MOJITO367131979.472062.1250137MICHELOB ULTRA AMBER344840523.823794.0625148MIKES HARD LIGHT LEMONADE234518694.981227.4609150MOLSON CANADIAN220827934.242476.7812151WILD BLUE218418492.021228.5000155MICHELOB ULTRA LIME CACTUS203714164.511145.8125164MIKES HARD MANGO PUNCH182115009.59953.1797188BUSCH LIGHT119916722.412918.4375  | 80  | GEORGE KILLIANS IRISH RED LAG | 8653  | 61160.79  | 4867.3125  |
| 97HORNSBYS AMBER DRAFT587540276.983302.8125101MILWAUKEES BEST575486107.4815879.3750102MILLER CHILL566252744.745300.4375104LANDSHARK LAGER549549040.463534.1875105MICHELOB AMBER BOCK545663777.225563.6875107MIKES HARD SEASONAL538848953.933267.8203112MIKES HARD CRANBERRY LEMONADE483240218.302525.7500134BACARDI SILVER MOJITO367131979.472062.1250137MICHELOB ULTRA AMBER344840523.823794.0625148MIKES HARD LIGHT LEMONADE234518694.981227.4609150MOLSON CANADIAN220827934.242476.7812151WILD BLUE218418492.021228.5000155MICHELOB ULTRA LIME CACTUS203714164.511145.8125164MIKES HARD MANGO PUNCH182115009.59953.1797188BUSCH LIGHT119916722.412918.4375   | 84  | SMIRNOFF ICE RASPBERRY BURST  | 8311  | 65694.02  | 4350.2891  |
| 101MILWAUKEES BEST575486107.4815879.3750102MILLER CHILL566252744.745300.4375104LANDSHARK LAGER549549040.463534.1875105MICHELOB AMBER BOCK545663777.225563.6875107MIKES HARD SEASONAL538848953.933267.8203112MIKES HARD CRANBERRY LEMONADE483240218.302525.7500134BACARDI SILVER MOJITO367131979.472062.1250137MICHELOB ULTRA AMBER344840523.823794.0625148MIKES HARD LIGHT LEMONADE234518694.981227.4609150MOLSON CANADIAN220827934.242476.7812151WILD BLUE218418492.021228.5000155MICHELOB ULTRA LIME CACTUS203714164.511145.8125164MIKES HARD MANGO PUNCH182115009.59953.1797188BUSCH LIGHT119916722.412918.4375  | 92  | ODOULS AMBER                  | 6201  | 37480.50  | 3488.0625  |
| 102       MILLER CHILL       5662       52744.74       5300.4375         104       LANDSHARK LAGER       5495       49040.46       3534.1875         105       MICHELOB AMBER BOCK       5456       63777.22       5563.6875         107       MIKES HARD SEASONAL       5388       48953.93       3267.8203         112       MIKES HARD CRANBERRY LEMONADE       4832       40218.30       2525.7500         134       BACARDI SILVER MOJITO       3671       31979.47       2062.1250         137       MICHELOB ULTRA AMBER       3448       40523.82       3794.0625         148       MIKES HARD LIGHT LEMONADE       2345       18694.98       1227.4609         150       MOLSON CANADIAN       2208       27934.24       2476.7812         151       WILD BLUE       2184       18492.02       1228.5000         155       MICHELOB ULTRA LIME CACTUS       2037       14164.51       1145.8125         164       MIKES HARD MANGO PUNCH       1821       15009.59       953.1797         188       BUSCH LIGHT       1199       16722.41       2918.4375  | 97  | HORNSBYS AMBER DRAFT          | 5875  | 40276.98  | 3302.8125  |
| 104       LANDSHARK LAGER       5495       49040.46       3534.1875         105       MICHELOB AMBER BOCK       5456       63777.22       5563.6875         107       MIKES HARD SEASONAL       5388       48953.93       3267.8203         112       MIKES HARD CRANBERRY LEMONADE       4832       40218.30       2525.7500         134       BACARDI SILVER MOJITO       3671       31979.47       2062.1250         137       MICHELOB ULTRA AMBER       3448       40523.82       3794.0625         148       MIKES HARD LIGHT LEMONADE       2345       18694.98       1227.4609         150       MOLSON CANADIAN       2208       27934.24       2476.7812         151       WILD BLUE       2184       18492.02       1228.5000         155       MICHELOB ULTRA LIME CACTUS       2037       14164.51       1145.8125         164       MIKES HARD MANGO PUNCH       1821       15009.59       953.1797         188       BUSCH LIGHT       1199       16722.41       2918.4375   | 101 | MILWAUKEES BEST               | 5754  | 86107.48  | 15879.3750 |
| 105         MICHELOB AMBER BOCK         5456         63777.22         5563.6875           107         MIKES HARD SEASONAL         5388         48953.93         3267.8203           112         MIKES HARD CRANBERRY LEMONADE         4832         40218.30         2525.7500           134         BACARDI SILVER MOJITO         3671         31979.47         2062.1250           137         MICHELOB ULTRA AMBER         3448         40523.82         3794.0625           148         MIKES HARD LIGHT LEMONADE         2345         18694.98         1227.4609           150         MOLSON CANADIAN         2208         27934.24         2476.7812           151         WILD BLUE         2184         18492.02         1228.5000           155         MICHELOB ULTRA LIME CACTUS         2037         14164.51         1145.8125           164         MIKES HARD MANGO PUNCH         1821         15009.59         953.1797           188         BUSCH LIGHT         1199         16722.41         2918.4375   | 102 | MILLER CHILL                  | 5662  | 52744.74  | 5300.4375  |
| 107MIKES HARD SEASONAL538848953.933267.8203112MIKES HARD CRANBERRY LEMONADE483240218.302525.7500134BACARDI SILVER MOJITO367131979.472062.1250137MICHELOB ULTRA AMBER344840523.823794.0625148MIKES HARD LIGHT LEMONADE234518694.981227.4609150MOLSON CANADIAN220827934.242476.7812151WILD BLUE218418492.021228.5000155MICHELOB ULTRA LIME CACTUS203714164.511145.8125164MIKES HARD MANGO PUNCH182115009.59953.1797188BUSCH LIGHT119916722.412918.4375  | 104 | LANDSHARK LAGER               | 5495  | 49040.46  | 3534.1875  |
| 112       MIKES HARD CRANBERRY LEMONADE       4832       40218.30       2525.7500         134       BACARDI SILVER MOJITO       3671       31979.47       2062.1250         137       MICHELOB ULTRA AMBER       3448       40523.82       3794.0625         148       MIKES HARD LIGHT LEMONADE       2345       18694.98       1227.4609         150       MOLSON CANADIAN       2208       27934.24       2476.7812         151       WILD BLUE       2184       18492.02       1228.5000         155       MICHELOB ULTRA LIME CACTUS       2037       14164.51       1145.8125         164       MIKES HARD MANGO PUNCH       1821       15009.59       953.1797         188       BUSCH LIGHT       1199       16722.41       2918.4375   | 105 | MICHELOB AMBER BOCK           | 5456  | 63777.22  | 5563.6875  |
| 134       BACARDI SILVER MOJITO       3671       31979.47       2062.1250         137       MICHELOB ULTRA AMBER       3448       40523.82       3794.0625         148       MIKES HARD LIGHT LEMONADE       2345       18694.98       1227.4609         150       MOLSON CANADIAN       2208       27934.24       2476.7812         151       WILD BLUE       2184       18492.02       1228.5000         155       MICHELOB ULTRA LIME CACTUS       2037       14164.51       1145.8125         164       MIKES HARD MANGO PUNCH       1821       15009.59       953.1797         188       BUSCH LIGHT       1199       16722.41       2918.4375   | 107 | MIKES HARD SEASONAL           | 5388  | 48953.93  | 3267.8203  |
| 137       MICHELOB ULTRA AMBER       3448       40523.82       3794.0625         148       MIKES HARD LIGHT LEMONADE       2345       18694.98       1227.4609         150       MOLSON CANADIAN       2208       27934.24       2476.7812         151       WILD BLUE       2184       18492.02       1228.5000         155       MICHELOB ULTRA LIME CACTUS       2037       14164.51       1145.8125         164       MIKES HARD MANGO PUNCH       1821       15009.59       953.1797         188       BUSCH LIGHT       1199       16722.41       2918.4375   | 112 | MIKES HARD CRANBERRY LEMONADE | 4832  | 40218.30  | 2525.7500  |
| 148       MIKES HARD LIGHT LEMONADE       2345       18694.98       1227.4609         150       MOLSON CANADIAN       2208       27934.24       2476.7812         151       WILD BLUE       2184       18492.02       1228.5000         155       MICHELOB ULTRA LIME CACTUS       2037       14164.51       1145.8125         164       MIKES HARD MANGO PUNCH       1821       15009.59       953.1797         188       BUSCH LIGHT       1199       16722.41       2918.4375  | 134 | BACARDI SILVER MOJITO         | 3671  | 31979.47  | 2062.1250  |
| 150       MOLSON CANADIAN       2208       27934.24       2476.7812         151       WILD BLUE       2184       18492.02       1228.5000         155       MICHELOB ULTRA LIME CACTUS       2037       14164.51       1145.8125         164       MIKES HARD MANGO PUNCH       1821       15009.59       953.1797         188       BUSCH LIGHT       1199       16722.41       2918.4375  | 137 | MICHELOB ULTRA AMBER          | 3448  | 40523.82  | 3794.0625  |
| 151       WILD BLUE       2184       18492.02       1228.5000         155       MICHELOB ULTRA LIME CACTUS       2037       14164.51       1145.8125         164       MIKES HARD MANGO PUNCH       1821       15009.59       953.1797         188       BUSCH LIGHT       1199       16722.41       2918.4375  | 148 | MIKES HARD LIGHT LEMONADE     | 2345  | 18694.98  | 1227.4609  |
| 155       MICHELOB ULTRA LIME CACTUS       2037       14164.51       1145.8125         164       MIKES HARD MANGO PUNCH       1821       15009.59       953.1797         188       BUSCH LIGHT       1199       16722.41       2918.4375  | 150 | MOLSON CANADIAN               | 2208  | 27934.24  | 2476.7812  |
| 164       MIKES HARD MANGO PUNCH       1821       15009.59       953.1797         188       BUSCH LIGHT       1199       16722.41       2918.4375   | 151 | WILD BLUE                     | 2184  | 18492.02  | 1228.5000  |
| 188 BUSCH LIGHT 1199 16722.41 2918.4375   | 155 |                               | 2037  | 14164.51  | 1145.8125  |
|   | 164 | MIKES HARD MANGO PUNCH        | 1821  | 15009.59  | 953.1797   |
| 196 MICHELOB ULTR POMEGRANAT RSPB 1005 6578.16 565.3125   |     |                               | 1199  | 16722.41  | 2918.4375  |
|   | 196 | MICHELOB ULTR POMEGRANAT RSPB | 1005  | 6578.16   | 565.3125   |

Number of Conglomerates: 10 Number of firms: 12 Number of Brands: 64

#### **SPOKANE**

Algorithm run time: 0.9348817 minute(s).

prcntBrandRep\_units: 61.4910462%.
prcntBrandRep\_dol: 69.8887363%.
prcntBrandRep\_gal: 74.1680487%.
prcntFirmRep\_units: 87.7848472%.
prcntFirmRep\_dol: 88.4135588%.
prcntFirmRep\_gal: 91.6843602%.

prcntConglomerateRep\_units: 88.0464805%. prcntConglomerateRep\_dol: 88.6471378%. prcntConglomerateRep\_gal: 91.839752%.

Table 10: Aggregate Conglomerate Data for SPOKANE

|    | Conglomerates            | UNITS  | DOLLARS    | $total\_gal$ |
|----|--------------------------|--------|------------|--------------|
| 1  | SABMILLER                | 252638 | 2134996.27 | 254195.242   |
| 2  | ANHEUSER-BUSCH INBEV     | 247673 | 2088300.31 | 238447.078   |
| 3  | MARK ANTHONY BRANDS INC  | 38477  | 231367.55  | 15948.688    |
| 4  | CONSTELLATION BRANDS INC | 32097  | 316484.39  | 24500.867    |
| 6  | HEINEKEN USA INC         | 16490  | 146844.11  | 11006.008    |
| 7  | S & P COMPANY            | 14886  | 134935.24  | 18382.562    |
| 9  | DIAGEO                   | 14580  | 109754.52  | 7457.234     |
| 11 | BOSTON BEER CO           | 8029   | 69134.00   | 5575.094     |
| 14 | SIERRA NEVADA BREWING CO | 5561   | 47965.64   | 3624.945     |
| 16 | E & J GALLO WNRY         | 3921   | 29133.54   | 2200.406     |

Note:

Number of Conglomerates: 10

Table 11: Aggregate Firm Data for SPOKANE

|   | Firms                   | UNITS  | DOLLARS    | total_gal  |
|---|-------------------------|--------|------------|------------|
| 1 | ANHEUSER-BUSCH INBEV    | 236675 | 1987447.14 | 229331.016 |
| 2 | MILLERCOORS             | 236271 | 1984178.06 | 242001.023 |
| 3 | MARK ANTHONY BRANDS INC | 38477  | 231367.55  | 15948.688  |
| 4 | CROWN IMPORTS           | 32097  | 316484.39  | 24500.867  |
| 6 | HEINEKEN USA INC        | 16490  | 146844.11  | 11006.008  |

| 7  | TENTH & BLAKE BEER CO    | 16367 | 150818.21 | 12194.219 |
|----|--------------------------|-------|-----------|-----------|
| 8  | PABST BREWING CO         | 14886 | 134935.24 | 18382.562 |
| 10 | DIAGEO GUINNESS USA      | 12695 | 95765.90  | 6473.617  |
| 11 | MICHELOB BREWING CO      | 10998 | 100853.17 | 9116.062  |
| 13 | BOSTON BEER CO           | 8029  | 69134.00  | 5575.094  |
| 16 | SIERRA NEVADA BREWING CO | 5561  | 47965.64  | 3624.945  |
| 18 | E & J GALLO WNRY         | 3921  | 29133.54  | 2200.406  |

Number of Conglomerates: 10

Table 12: Aggregate Brand Data for SPOKANE

|    | Brands                        | UNITS | DOLLARS   | total_gal  |
|----|-------------------------------|-------|-----------|------------|
| 1  | COORS LIGHT                   | 56013 | 641680.70 | 72566.0938 |
| 2  | BUD LIGHT                     | 48851 | 531569.08 | 60305.3438 |
| 3  | BUDWEISER                     | 30483 | 276267.60 | 31425.7500 |
| 4  | KEYSTONE LIGHT                | 27751 | 298988.57 | 44466.0000 |
| 8  | MILLER HIGH LIFE              | 17076 | 125104.85 | 17866.1250 |
| 9  | CORONA EXTRA                  | 16807 | 176937.78 | 13516.0391 |
| 10 | BUSCH LIGHT                   | 14232 | 153372.77 | 23105.2500 |
| 11 | MILLER LITE                   | 13690 | 181572.94 | 20699.0000 |
| 12 | ICEHOUSE                      | 13522 | 63803.33  | 9336.1875  |
| 13 | BUD LIGHT LIME                | 13469 | 121681.87 | 10321.2500 |
| 14 | PABST BLUE RIBBON             | 12913 | 111374.31 | 15368.8750 |
| 15 | BUSCH                         | 12486 | 109394.57 | 16257.9375 |
| 16 | NATURAL ICE                   | 10601 | 79109.33  | 12360.1875 |
| 17 | BLUE MOON BELGIAN WHITE ALE   | 10288 | 95753.14  | 7789.2344  |
| 18 | NATURAL LIGHT                 | 10101 | 103825.01 | 16290.9375 |
| 20 | MILLER GENUINE DRAFT          | 8219  | 96520.74  | 10687.3125 |
| 21 | HEINEKEN                      | 7870  | 75921.29  | 5530.3359  |
| 22 | ROLLING ROCK EXTRA PALE       | 7622  | 62192.01  | 6918.9375  |
| 23 | MIKES HARD CRANBERRY LEMONADE | 7131  | 25698.61  | 1792.5625  |
| 26 | MIKES HARD LEMONADE           | 6846  | 33523.13  | 2334.5625  |
| 27 | MICHELOB ULTRA                | 5736  | 58955.02  | 5577.2812  |
| 29 | CORONA LIGHT                  | 5238  | 65326.02  | 5056.5000  |
| 30 | FOSTERS LAGER                 | 5091  | 12825.84  | 1093.3203  |
| 31 | SAINT PAULI GIRL              | 5067  | 28581.98  | 2495.0625  |
| 33 | COORS                         | 4900  | 75205.94  | 8811.0938  |
| 39 | BLUE MOON SEASONAL COLLECTION | 4237  | 40303.64  | 3298.5000  |
| 42 | NEWCASTLE BROWN ALE           | 3769  | 24089.98  | 1535.8125  |
| 44 | MILLER GENUINE DRAFT LIGHT 64 | 3701  | 43277.48  | 4734.5625  |
| 45 | BECKS                         | 3685  | 14124.87  | 1075.6875  |
| 48 | GUINNESS DRAUGHT              | 3405  | 31504.50  | 1975.5469  |
| 50 | SIERRA NEVADA PALE ALE        | 3387  | 31707.80  | 2396.7188  |
| 55 | SAMUEL ADAMS SEASONAL         | 3161  | 28832.40  | 2335.4062  |
| 60 | STELLA ARTOIS LAGER           | 2992  | 27464.10  | 1632.4531  |
| 62 | ODOULS                        | 2796  | 19019.73  | 2224.1250  |
| 63 | MIKES HARD SEASONAL           | 2763  | 22548.93  | 1512.4531  |

| 64  | SAMUEL ADAMS BOSTON LAGER     | 2639 | 26265.56 | 2150.0312 |
|-----|-------------------------------|------|----------|-----------|
| 70  | MILLER CHILL                  | 2408 | 20568.51 | 1874.3438 |
| 75  | GEORGE KILLIANS IRISH RED LAG | 2123 | 12242.60 | 1193.2500 |
| 76  | SMIRNOFF ICE RASPBERRY BURST  | 2087 | 15663.50 | 1088.4766 |
| 81  | DOS EQUIS XX AMBAR LAGER      | 1927 | 15904.56 | 1251.8438 |
| 86  | ODOULS AMBER                  | 1803 | 8899.88  | 1000.1250 |
| 87  | MOLSON CANADIAN               | 1758 | 19262.50 | 1955.8125 |
| 88  | GUINNESS EXTRA STOUT          | 1751 | 6097.45  | 367.7500  |
| 92  | SHOCK TOP BELGIAN WHITE ALE   | 1716 | 14129.92 | 1075.5000 |
| 95  | MODELO ESPECIAL               | 1597 | 10171.29 | 799.1250  |
| 99  | MIKES HARD LIGHT LEMONADE     | 1545 | 11943.32 | 803.4609  |
| 100 | TECATE                        | 1544 | 13789.44 | 1366.6875 |
| 105 | HORNSBYS AMBER DRAFT          | 1421 | 10560.62 | 797.9062  |
| 108 | SMIRNOFF ICE GREEN APPLE BITE | 1278 | 9146.59  | 630.8906  |
| 109 | MICHELOB ULTRA LIME CACTUS    | 1228 | 7798.13  | 684.6562  |
| 111 | MIKES HARD MANGO PUNCH        | 1197 | 9338.94  | 614.3047  |
| 112 | HEINEKEN PREMIUM LIGHT LAGER  | 1060 | 13532.24 | 1041.0156 |
| 113 | BUD LIGHT GOLDEN WHEAT        | 1041 | 10091.92 | 846.0938  |
| 115 | BACARDI SILVER MOJITO         | 977  | 7688.42  | 544.8750  |
| 116 | LANDSHARK LAGER               | 885  | 7032.15  | 498.9375  |
| 121 | WILD BLUE                     | 787  | 4062.83  | 279.5625  |
| 122 | NEGRA MODELO                  | 783  | 7343.64  | 524.8125  |
| 127 | MICHELOB ULTRA AMBER          | 741  | 8279.85  | 806.0625  |
| 129 | SMIRNOFF ICE PARTY PACK       | 720  | 9868.30  | 753.7500  |
| 143 | RED STRIPE                    | 513  | 3299.79  | 228.8594  |
| 144 | SMIRNOFF ICE                  | 506  | 3781.58  | 263.1094  |
| 163 | MICHELOB AMBER BOCK           | 371  | 2548.27  | 207.7500  |
| 164 | MICHELOB ULTR POMEGRANAT RSPB | 366  | 2330.24  | 205.8750  |
| 167 | MILWAUKEES BEST               | 356  | 5807.18  | 930.3750  |

Number of Conglomerates: 10

Number of firms: 12

Number of Brands: 64

#### **SYRACUSE**

Algorithm name: S5.aggregate\_allBrands\_2010(Market = 'SYRACUSE', figurePlot = T, screenPlot = F, saveData = T, out\_algoRunTime = T)

Algorithm run time: 0.9855262 minute(s).

prcntBrandRep\_units: 52.0235862%.
prcntBrandRep\_dol: 55.7704034%.
prcntBrandRep\_gal: 58.1498739%.
prcntFirmRep\_units: 67.1302783%.
prcntFirmRep\_dol: 68.986812%.
prcntFirmRep\_gal: 70.6510174%.

prcntConglomerateRep\_units: 68.0730855%. prcntConglomerateRep\_dol: 69.803742%. prcntConglomerateRep\_gal: 71.1297963%.

Table 13: Aggregate Conglomerate Data for SYRACUSE

|    | Conglomerates            | UNITS  | DOLLARS    | $total\_gal$ |
|----|--------------------------|--------|------------|--------------|
| 1  | ANHEUSER-BUSCH INBEV     | 338744 | 3884870.89 | 474189.648   |
| 2  | SABMILLER                | 277912 | 2904041.43 | 379706.828   |
| 4  | BOSTON BEER CO           | 66040  | 692274.52  | 50581.914    |
| 6  | DIAGEO                   | 56705  | 567253.32  | 36822.219    |
| 7  | HEINEKEN USA INC         | 45554  | 552771.66  | 41563.078    |
| 8  | S & P COMPANY            | 36986  | 372602.39  | 61162.000    |
| 9  | CONSTELLATION BRANDS INC | 33738  | 429447.57  | 32530.453    |
| 11 | MARK ANTHONY BRANDS INC  | 27266  | 274463.22  | 17694.070    |
| 12 | SIERRA NEVADA BREWING CO | 10507  | 112255.15  | 7659.445     |
| 44 | E & J GALLO WNRY         | 560    | 4609.34    | 315.000      |

Note:

Number of Conglomerates: 10

Table 14: Aggregate Firm Data for SYRACUSE

|   | Firms                | UNITS  | DOLLARS    | total_gal  |
|---|----------------------|--------|------------|------------|
| 1 | ANHEUSER-BUSCH INBEV | 270949 | 3034364.29 | 376401.273 |
| 2 | MILLERCOORS          | 256796 | 2666600.19 | 362881.086 |
| 4 | MICHELOB BREWING CO  | 67795  | 850506.60  | 97788.375  |
| 5 | BOSTON BEER CO       | 66040  | 692274.52  | 50581.914  |
| 7 | HEINEKEN USA INC     | 45554  | 552771.66  | 41563.078  |

| 8  | DIAGEO GUINNESS USA      | 44323 | 452624.87 | 29403.078 |
|----|--------------------------|-------|-----------|-----------|
| 9  | PABST BREWING CO         | 36986 | 372602.39 | 61162.000 |
| 10 | CROWN IMPORTS            | 33738 | 429447.57 | 32530.453 |
| 12 | MARK ANTHONY BRANDS INC  | 27266 | 274463.22 | 17694.070 |
| 13 | TENTH & BLAKE BEER CO    | 21116 | 237441.24 | 16825.742 |
| 15 | SIERRA NEVADA BREWING CO | 10507 | 112255.15 | 7659.445  |
| 48 | E & J GALLO WNRY         | 560   | 4609.34   | 315.000   |

Number of Conglomerates: 10

Table 15: Aggregate Brand Data for SYRACUSE

|    | Brands                        | UNITS | DOLLARS    | total_gal   |
|----|-------------------------------|-------|------------|-------------|
| 1  | BUD LIGHT                     | 96830 | 1243364.94 | 160695.5156 |
| 3  | COORS LIGHT                   | 81795 | 1043462.94 | 134755.0781 |
| 5  | BUDWEISER                     | 55324 | 590187.39  | 74987.7344  |
| 6  | MICHELOB ULTRA                | 42767 | 597750.82  | 72457.3125  |
| 7  | KEYSTONE LIGHT                | 29856 | 284593.82  | 49503.5625  |
| 8  | MILLER LITE                   | 25736 | 341540.75  | 43613.8750  |
| 10 | BUD LIGHT LIME                | 22043 | 239342.61  | 21250.6094  |
| 12 | HEINEKEN                      | 21610 | 261264.17  | 19587.8516  |
| 13 | MOLSON CANADIAN               | 20218 | 204751.06  | 25389.1875  |
| 14 | CORONA EXTRA                  | 19489 | 247840.63  | 18734.3906  |
| 16 | BUSCH                         | 18246 | 181409.38  | 31123.5000  |
| 18 | SAMUEL ADAMS SEASONAL         | 16728 | 195356.66  | 14121.5625  |
| 19 | BUSCH LIGHT                   | 14439 | 160666.48  | 27402.1875  |
| 22 | PABST BLUE RIBBON             | 12991 | 129009.71  | 21201.9375  |
| 23 | CORONA LIGHT                  | 12430 | 162460.79  | 12432.7500  |
| 24 | GUINNESS DRAUGHT              | 11805 | 134443.10  | 8455.0234   |
| 25 | BLUE MOON BELGIAN WHITE ALE   | 11504 | 131967.54  | 9503.3594   |
| 26 | MILLER HIGH LIFE              | 11384 | 91800.76   | 14903.2500  |
| 28 | HEINEKEN PREMIUM LIGHT LAGER  | 9945  | 132135.49  | 9942.9141   |
| 30 | SAMUEL ADAMS BOSTON LAGER     | 9744  | 115843.60  | 8392.7188   |
| 35 | MILLER GENUINE DRAFT LIGHT 64 | 8248  | 104513.19  | 12785.8125  |
| 40 | SMIRNOFF ICE                  | 6993  | 69465.28   | 4635.1094   |
| 41 | NATURAL ICE                   | 6730  | 42114.98   | 7247.0625   |
| 43 | MILWAUKEES BEST               | 6172  | 46675.37   | 8093.0625   |
| 45 | SIERRA NEVADA PALE ALE        | 5859  | 69733.53   | 4861.6875   |
| 46 | STELLA ARTOIS LAGER           | 5501  | 65567.46   | 4268.4297   |
| 47 | FOSTERS LAGER                 | 5381  | 20462.04   | 1842.0781   |
| 48 | MIKES HARD LEMONADE           | 5309  | 55887.82   | 3632.1328   |
| 50 | BECKS                         | 4888  | 52609.91   | 3868.1250   |
| 52 | ROLLING ROCK EXTRA PALE       | 4788  | 58027.38   | 7792.8750   |
| 58 | BLUE MOON SEASONAL COLLECTION | 4391  | 47945.62   | 3401.4375   |
| 61 | MICHELOB ULTR POMEGRANAT RSPB | 4228  | 28299.79   | 2378.2500   |
| 62 | NEWCASTLE BROWN ALE           | 4176  | 53350.12   | 3782.1250   |
| 63 | SMIRNOFF ICE RASPBERRY BURST  | 4035  | 30362.11   | 1921.9297   |
| 64 | GEORGE KILLIANS IRISH RED LAG | 4015  | 43140.78   | 3557.2500   |

| 66  | SHOCK TOP BELGIAN WHITE ALE   | 3965 | 39345.13 | 2958.1875 |
|-----|-------------------------------|------|----------|-----------|
| 68  | ICEHOUSE                      | 3893 | 17182.43 | 2921.8125 |
| 70  | ODOULS                        | 3672 | 27937.49 | 2737.1250 |
| 72  | SMIRNOFF ICE PARTY PACK       | 3593 | 54428.57 | 3761.4219 |
| 73  | COORS                         | 3545 | 53222.67 | 7093.6875 |
| 74  | MIKES HARD SEASONAL           | 3521 | 32364.86 | 2050.3047 |
| 78  | MICHELOB ULTRA LIME CACTUS    | 3057 | 21090.59 | 1809.0000 |
| 80  | BUD LIGHT GOLDEN WHEAT        | 2994 | 29987.95 | 2605.3438 |
| 86  | MIKES HARD CRANBERRY LEMONADE | 2711 | 23005.99 | 1428.4609 |
| 87  | LANDSHARK LAGER               | 2658 | 31181.32 | 2232.0000 |
| 89  | NATURAL LIGHT                 | 2588 | 23089.52 | 3804.9375 |
| 96  | RED STRIPE                    | 2363 | 19662.36 | 1259.3438 |
| 97  | MICHELOB ULTRA AMBER          | 2288 | 23299.45 | 2390.6250 |
| 98  | WILD BLUE                     | 2241 | 19206.63 | 1260.5625 |
| 101 | GUINNESS EXTRA STOUT          | 2201 | 18151.12 | 1056.0312 |
| 105 | MIKES HARD LIGHT LEMONADE     | 2049 | 17311.11 | 1072.5234 |
| 122 | ODOULS AMBER                  | 1452 | 8597.25  | 816.7500  |
| 127 | MILLER CHILL                  | 1359 | 14109.88 | 1193.6250 |
| 140 | BACARDI SILVER MOJITO         | 1169 | 9556.76  | 657.5625  |
| 144 | MICHELOB AMBER BOCK           | 1110 | 11847.65 | 1116.5625 |
| 152 | DOS EQUIS XX AMBAR LAGER      | 1053 | 11654.27 | 928.6875  |
| 175 | SMIRNOFF ICE GREEN APPLE BITE | 689  | 5807.21  | 360.6484  |
| 177 | MILLER GENUINE DRAFT          | 683  | 9531.71  | 1170.0000 |
| 192 | SAINT PAULI GIRL              | 592  | 6959.42  | 494.4375  |
| 197 | MIKES HARD MANGO PUNCH        | 576  | 5034.74  | 301.5000  |
| 220 | MODELO ESPECIAL               | 442  | 4944.26  | 364.8750  |
| 223 | HORNSBYS AMBER DRAFT          | 435  | 3591.39  | 244.6875  |
| 248 | TECATE                        | 369  | 2303.61  | 207.5625  |
| 250 | NEGRA MODELO                  | 366  | 3732.66  | 268.3125  |

Number of Conglomerates: 10 Number of firms: 12

Number of Brands: 64

#### **HOUSTON**

Algorithm run time: 0.9421285 minute(s).

prcntBrandRep\_units: 77.1096518%.
prcntBrandRep\_dol: 83.1338586%.
prcntBrandRep\_gal: 85.769397%.
prcntFirmRep\_units: 91.9714731%.
prcntFirmRep\_dol: 93.2620405%.
prcntFirmRep\_gal: 95.5398533%.

prcntConglomerateRep\_units: 92.2991856%. prcntConglomerateRep\_dol: 93.5279309%. prcntConglomerateRep\_gal: 95.6970994%.

Table 16: Aggregate Conglomerate Data for HOUSTON

|    | Conglomerates            | UNITS   | DOLLARS     | total_gal   |
|----|--------------------------|---------|-------------|-------------|
| 1  | ANHEUSER-BUSCH INBEV     | 1203951 | 11563540.03 | 1445351.578 |
| 2  | SABMILLER                | 528232  | 5263842.34  | 667612.188  |
| 3  | CONSTELLATION BRANDS INC | 212643  | 2299642.24  | 192718.898  |
| 4  | HEINEKEN USA INC         | 159243  | 1479595.50  | 123757.617  |
| 6  | DIAGEO                   | 64955   | 450060.20   | 30067.453   |
| 7  | S & P COMPANY            | 40467   | 282425.55   | 38605.500   |
| 9  | BOSTON BEER CO           | 23532   | 201035.68   | 14680.203   |
| 10 | MARK ANTHONY BRANDS INC  | 12924   | 105319.96   | 6655.398    |
| 12 | SIERRA NEVADA BREWING CO | 8352    | 68307.67    | 4800.227    |
| 18 | E & J GALLO WNRY         | 2537    | 19637.58    | 1426.594    |

Note:

Number of Conglomerates: 10

Table 17: Aggregate Firm Data for HOUSTON

|   | Firms                | UNITS   | DOLLARS     | total_gal   |
|---|----------------------|---------|-------------|-------------|
| 1 | ANHEUSER-BUSCH INBEV | 1153408 | 11058321.57 | 1399022.156 |
| 2 | MILLERCOORS          | 504198  | 5071027.85  | 653251.336  |
| 3 | CROWN IMPORTS        | 212643  | 2299642.24  | 192718.898  |
| 4 | HEINEKEN USA INC     | 159243  | 1479595.50  | 123757.617  |
| 6 | DIAGEO GUINNESS USA  | 56942   | 388274.34   | 25917.352   |

| 7  | MICHELOB BREWING CO      | 50543 | 505218.46 | 46329.422 |
|----|--------------------------|-------|-----------|-----------|
| 8  | PABST BREWING CO         | 40467 | 282425.55 | 38605.500 |
| 9  | TENTH & BLAKE BEER CO    | 24034 | 192814.49 | 14360.852 |
| 11 | BOSTON BEER CO           | 23532 | 201035.68 | 14680.203 |
| 12 | MARK ANTHONY BRANDS INC  | 12924 | 105319.96 | 6655.398  |
| 14 | SIERRA NEVADA BREWING CO | 8352  | 68307.67  | 4800.227  |
| 21 | E & J GALLO WNRY         | 2537  | 19637.58  | 1426.594  |

Number of Conglomerates: 10

Table 18: Aggregate Brand Data for HOUSTON

|    | Brands                        | UNITS  | DOLLARS    | total_gal   |
|----|-------------------------------|--------|------------|-------------|
| 1  | BUD LIGHT                     | 568615 | 6648269.71 | 819202.4531 |
| 2  | MILLER LITE                   | 207002 | 2535238.08 | 307115.1250 |
| 3  | BUDWEISER                     | 142821 | 1474614.48 | 179448.2500 |
| 4  | CORONA EXTRA                  | 121224 | 1449821.76 | 117866.2188 |
| 5  | BUSCH                         | 112271 | 739349.96  | 121427.6250 |
| 6  | COORS LIGHT                   | 85751  | 1037365.06 | 124484.8125 |
| 7  | BUSCH LIGHT                   | 65564  | 486107.15  | 80540.0625  |
| 8  | HEINEKEN                      | 62623  | 619662.29  | 48044.9453  |
| 9  | MILLER HIGH LIFE              | 57934  | 387574.56  | 60986.3750  |
| 10 | MODELO ESPECIAL               | 54627  | 476442.66  | 45364.7812  |
| 12 | NATURAL LIGHT                 | 40125  | 345811.34  | 57958.1250  |
| 14 | BUD LIGHT LIME                | 34793  | 314803.01  | 27856.8750  |
| 15 | MICHELOB ULTRA                | 33970  | 380596.86  | 35672.9531  |
| 17 | KEYSTONE LIGHT                | 29738  | 291550.47  | 48397.3125  |
| 19 | TECATE                        | 24321  | 198085.83  | 20860.0625  |
| 20 | CORONA LIGHT                  | 18749  | 214596.78  | 17055.8438  |
| 24 | ICEHOUSE                      | 13928  | 37801.04   | 5670.5000   |
| 26 | SMIRNOFF ICE                  | 13202  | 81316.83   | 5606.2422   |
| 27 | MILLER GENUINE DRAFT LIGHT 64 | 12700  | 137852.08  | 15750.9375  |
| 30 | BLUE MOON BELGIAN WHITE ALE   | 10355  | 88926.64   | 6883.6406   |
| 31 | GUINNESS EXTRA STOUT          | 9948   | 59131.20   | 3823.5156   |
| 32 | ODOULS                        | 9206   | 50642.47   | 5211.5625   |
| 36 | NEGRA MODELO                  | 8565   | 82465.52   | 6562.2188   |
| 38 | MILLER GENUINE DRAFT          | 8117   | 84012.20   | 9575.2500   |
| 41 | BECKS                         | 7770   | 41032.64   | 3097.7812   |
| 42 | FOSTERS LAGER                 | 7615   | 24995.63   | 1878.3672   |
| 43 | HEINEKEN PREMIUM LIGHT LAGER  | 7443   | 84939.45   | 6487.0859   |
| 44 | GUINNESS DRAUGHT              | 7332   | 58156.21   | 3598.5078   |
| 45 | MILWAUKEES BEST               | 7238   | 62988.73   | 10644.5625  |
| 49 | SAMUEL ADAMS SEASONAL         | 6529   | 59510.10   | 4410.3750   |
| 50 | STELLA ARTOIS LAGER           | 6356   | 56153.87   | 3369.2422   |
| 52 | SMIRNOFF ICE GREEN APPLE BITE | 5932   | 39686.33   | 2703.9219   |
| 54 | COORS                         | 5644   | 66443.43   | 7796.8125   |
| 55 | SAMUEL ADAMS BOSTON LAGER     | 5628   | 53283.88   | 4148.8594   |
| 65 | RED STRIPE                    | 4619   | 31545.60   | 2125.1172   |

| 67  | BLUE MOON SEASONAL COLLECTION | 4469 | 34021.33 | 2588.6250 |
|-----|-------------------------------|------|----------|-----------|
| 68  | SIERRA NEVADA PALE ALE        | 4451 | 38543.97 | 2802.1875 |
| 72  | NEWCASTLE BROWN ALE           | 3889 | 34884.04 | 2444.8672 |
| 74  | MICHELOB ULTRA LIME CACTUS    | 3690 | 24520.94 | 2057.3438 |
| 75  | ROLLING ROCK EXTRA PALE       | 3688 | 33206.83 | 2748.9375 |
| 76  | DOS EQUIS XX AMBAR LAGER      | 3656 | 34722.02 | 2812.9688 |
| 77  | LANDSHARK LAGER               | 3578 | 29592.16 | 2230.7812 |
| 78  | BACARDI SILVER MOJITO         | 3514 | 25376.27 | 1977.7500 |
| 80  | MIKES HARD LEMONADE           | 3140 | 25487.81 | 1635.3281 |
| 85  | BUD LIGHT GOLDEN WHEAT        | 2904 | 23349.07 | 1973.8125 |
| 86  | NATURAL ICE                   | 2857 | 12256.69 | 2149.8750 |
| 89  | ODOULS AMBER                  | 2555 | 13942.34 | 1437.1875 |
| 94  | MICHELOB ULTRA AMBER          | 2422 | 21924.67 | 1976.4375 |
| 96  | PABST BLUE RIBBON             | 2293 | 14091.26 | 1949.8125 |
| 97  | MILLER CHILL                  | 2268 | 17399.37 | 1610.1562 |
| 98  | SAINT PAULI GIRL              | 2253 | 17236.80 | 1321.4062 |
| 100 | SHOCK TOP BELGIAN WHITE ALE   | 2068 | 14104.92 | 1069.5000 |
| 101 | MIKES HARD SEASONAL           | 2032 | 16700.83 | 1063.6250 |
| 106 | MICHELOB ULTR POMEGRANAT RSPB | 1791 | 11327.37 | 959.6250  |
| 115 | MIKES HARD LIGHT LEMONADE     | 1601 | 13223.94 | 838.0234  |
| 127 | GEORGE KILLIANS IRISH RED LAG | 1257 | 9111.63  | 630.6562  |
| 145 | MICHELOB AMBER BOCK           | 1038 | 6224.73  | 541.6875  |
| 147 | MOLSON CANADIAN               | 1035 | 6910.90  | 582.1875  |
| 149 | SMIRNOFF ICE RASPBERRY BURST  | 1020 | 7784.49  | 533.9062  |
| 151 | HORNSBYS AMBER DRAFT          | 991  | 7689.98  | 556.9688  |
| 156 | MIKES HARD CRANBERRY LEMONADE | 961  | 7920.20  | 503.0234  |
| 169 | WILD BLUE                     | 806  | 5464.54  | 356.3438  |
| 190 | MIKES HARD MANGO PUNCH        | 600  | 5080.09  | 314.0625  |
| 252 | SMIRNOFF ICE PARTY PACK       | 350  | 5227.42  | 366.4062  |
|     |                               |      |          |           |

Number of Conglomerates: 10 Number of firms: 12

Number of Brands: 64

Plots:

#### **CHICAGO**

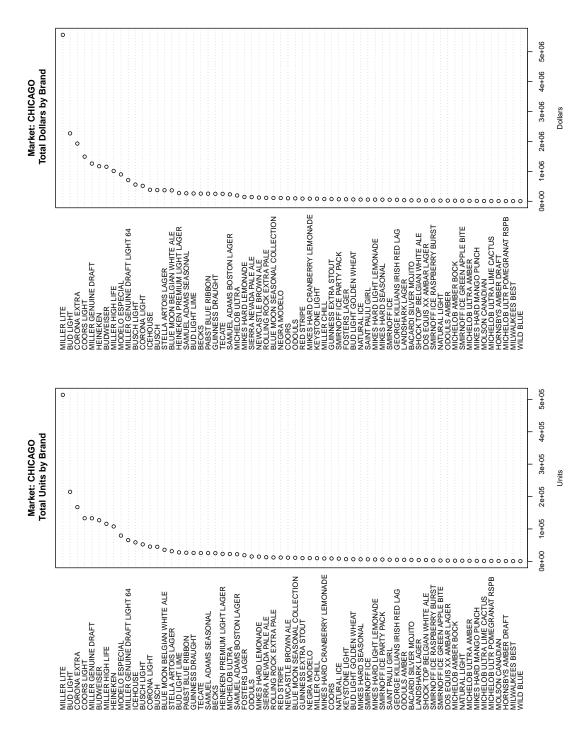


Figure 1: Plot of Aggregate Data for CHICAGO

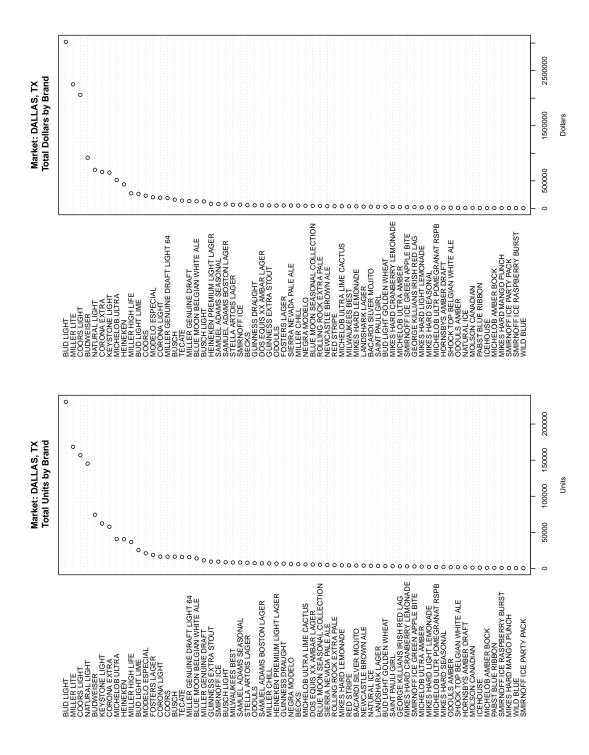


Figure 2: Plot of Aggregate Data for DALLAS, TX

#### LOS ANGELES

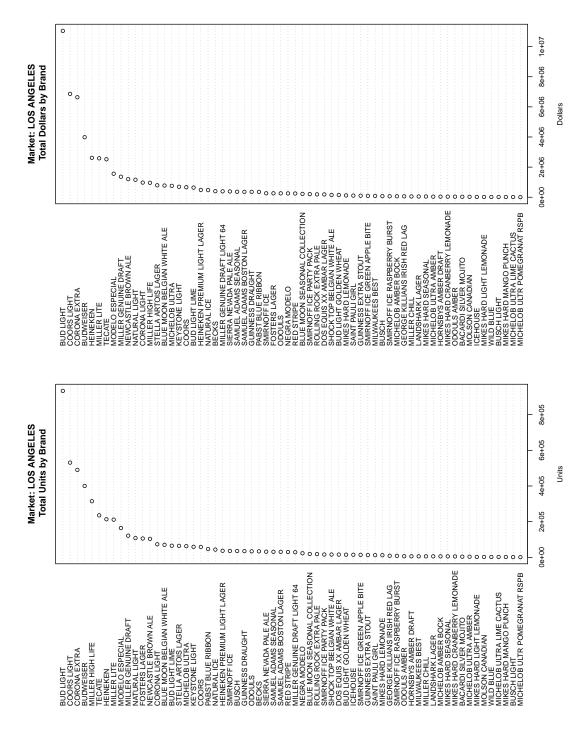


Figure 3: Plot of Aggregate Data for LOS ANGELES

#### **SPOKANE**

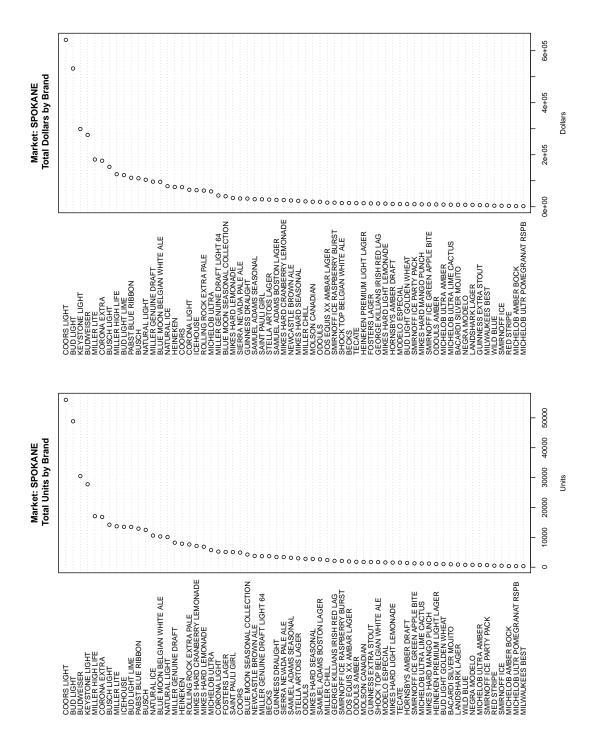


Figure 4: Plot of Aggregate Data for SPOKANE

#### **SYRACUSE**

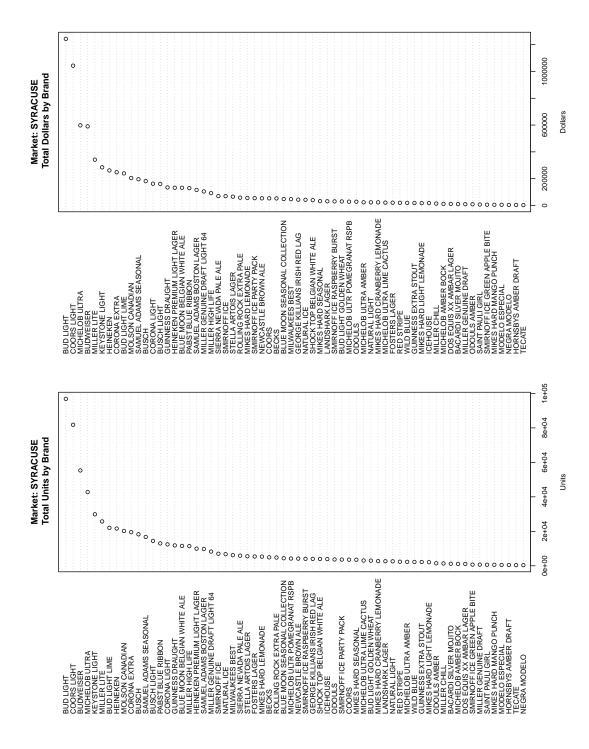


Figure 5: Plot of Aggregate Data for SYRACUSE

#### **HOUSTON**

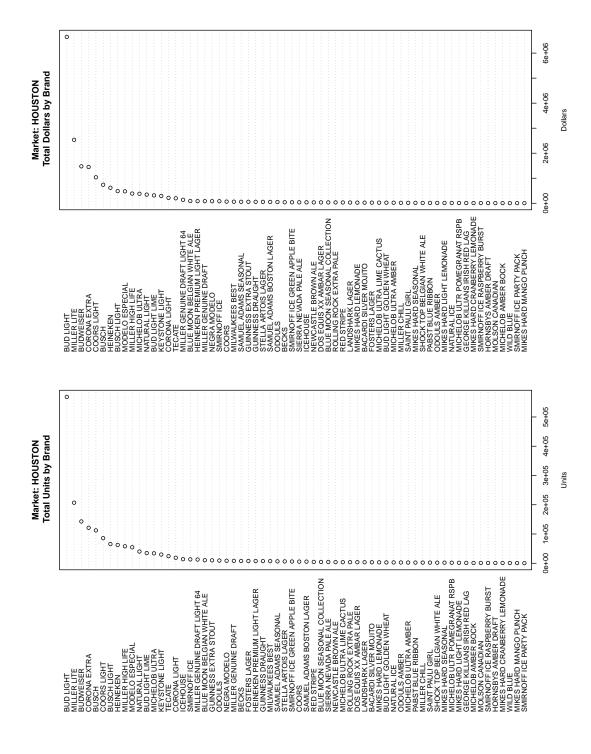


Figure 6: Plot of Aggregate Data for HOUSTON

### S6.hierarchyTree - Data Trees

```
Algorithm name: S6.hierarchyTree(Market = NULL,
                               saveMarketHierarchy = F,
                               saveAllBrandHierarchy = T,
                               out_algoRunTime = T )
Algorithm run time: 46.782476 minute(s).
City Data:
CHICAGO
Algorithm name: S6.hierarchyTree(Market = 'CHICAGO',
                               saveMarketHierarchy = T,
                               saveAllBrandHierarchy = F,
                               out_algoRunTime = T )
Algorithm run time: 1.680428 minute(s).
                                    levelName
## 1 Conglomerate
     --SABMILLER
## 3
         --MILLERCOORS
## 4
             |--MILLER GENUINE DRAFT
## 5
            |--MILLER LITE
## 6
            |--MILLER GENUINE DRAFT LIGHT 64
## 7
            |--MILLER HIGH LIFE
## 8
             |--COORS LIGHT
## 9
            --ICEHOUSE
## 10 ¦
            |--MILLER CHILL
## 11 ¦
             |--KEYSTONE LIGHT
## 12 ¦
            --MILWAUKEES BEST
## 13 | | --GEORGE KILLIANS IRISH RED LAG
## 14 ¦
          | |--FOSTERS LAGER
## 15 | |
              --COORS
             °--MOLSON CANADIAN
## 16 | |
          °--TENTH & BLAKE BEER CO
## 17 ¦
             --BLUE MOON BELGIAN WHITE ALE
## 18
## 19
              *--BLUE MOON SEASONAL COLLECTION
## 20 |--HEINEKEN USA INC
          °--HEINEKEN USA INC
## 21 ¦
## 22 |
            --HEINEKEN
             --TECATE
## 23 |
## 24 ¦
            --NEWCASTLE BROWN ALE
## 25 |
             --HEINEKEN PREMIUM LIGHT LAGER
## 26 |
              °--DOS EQUIS XX AMBAR LAGER
## 27
     |--ANHEUSER-BUSCH INBEV
## 28 | --ANHEUSER-BUSCH INBEV
## 29 ¦
          | |--BUD LIGHT
```

```
## 31 | |
             :--BUDWEISER
## 32 ¦
             |--BUSCH LIGHT
              --STELLA ARTOIS LAGER
## 33
## 34
             |--BUSCH
## 35
             --ROLLING ROCK EXTRA PALE
## 36
             !--BECKS
## 37
              |--NATURAL LIGHT
## 38
             |--NATURAL ICE
## 39
             |--BACARDI SILVER MOJITO
## 40
             :--ODOULS
## 41
              |--BUD LIGHT GOLDEN WHEAT
## 42
             |--LANDSHARK LAGER
## 43
             |--ODOULS AMBER
              °--WILD BLUE
## 44
## 45
          °--MICHELOB BREWING CO
## 46
             --MICHELOB ULTRA
## 47 !
              --MICHELOB AMBER BOCK
              --SHOCK TOP BELGIAN WHITE ALE
## 48
## 49
              |--MICHELOB ULTRA LIME CACTUS
## 50 ¦
              --MICHELOB ULTR POMEGRANAT RSPB
## 51 ¦
              °--MICHELOB ULTRA AMBER
## 52 | --MARK ANTHONY BRANDS INC
## 53 ¦
          °--MARK ANTHONY BRANDS INC
## 54 ¦
             --MIKES HARD CRANBERRY LEMONADE
## 55 ¦
              --MIKES HARD LEMONADE
## 56
              |--MIKES HARD LIGHT LEMONADE
## 57
              --MIKES HARD MANGO PUNCH
## 58
              °--MIKES HARD SEASONAL
## 59 \ --BOSTON BEER CO
## 60
         °--BOSTON BEER CO
## 61 ¦
              --- SAMUEL ADAMS BOSTON LAGER
              °--SAMUEL ADAMS SEASONAL
## 62 ¦
## 63 |--CONSTELLATION BRANDS INC
          °--CROWN IMPORTS
## 64 ¦
## 65 ¦
             --CORONA EXTRA
## 66 !
              --CORONA LIGHT
              --MODELO ESPECIAL
## 67
## 68
              --NEGRA MODELO
## 69 ¦
              °--SAINT PAULI GIRL
## 70 |--SIERRA NEVADA BREWING CO
## 71 ¦
         °--SIERRA NEVADA BREWING CO
## 72 |
              °--SIERRA NEVADA PALE ALE
## 74 ¦
          °--DIAGEO GUINNESS USA
## 75
             --- SMIRNOFF ICE PARTY PACK
## 76 ¦
              |--SMIRNOFF ICE
## 77 |
              --- SMIRNOFF ICE GREEN APPLE BITE
              |--SMIRNOFF ICE RASPBERRY BURST
## 78 ¦
## 79
              --GUINNESS DRAUGHT
## 80 ¦
             --GUINNESS EXTRA STOUT
              °--RED STRIPE
## 81 ¦
```

#### DALLAS, TX

Algorithm run time: 1.7051688 minute(s).

```
##
                                  levelName
## 1 Conglomerate
## 2
      --ANHEUSER-BUSCH INBEV
        |--ANHEUSER-BUSCH INBEV
## 3
## 4
            |--BUD LIGHT
## 5
            |--BUD LIGHT LIME
## 6
          | |--BUDWEISER
## 7
            |--NATURAL LIGHT
## 8
            |--BUD LIGHT GOLDEN WHEAT
## 9
        | |--BUSCH
## 10 ¦
         ! !--BUSCH LIGHT
## 11 |
            |--BACARDI SILVER MOJITO
## 12 |
            |--LANDSHARK LAGER
## 13 | |
           --ODOULS
## 14 |
            |--STELLA ARTOIS LAGER
## 15 ¦
            |--NATURAL ICE
            --ROLLING ROCK EXTRA PALE
## 16 ¦
## 18 ¦
        | |--BECKS
            °--ODOULS AMBER
## 19 ¦
## 20 ¦
         °--MICHELOB BREWING CO
## 21 ¦
            |--MICHELOB ULTRA
## 22 |
            --MICHELOB ULTRA LIME CACTUS
## 23 ¦
             |--SHOCK TOP BELGIAN WHITE ALE
## 24 ¦
            --MICHELOB ULTRA AMBER
## 25 |
             |--MICHELOB AMBER BOCK
             °--MICHELOB ULTR POMEGRANAT RSPB
## 26 |
## 27 !--BOSTON BEER CO
## 28 ¦
         °--BOSTON BEER CO
## 29 ¦
             |--SAMUEL ADAMS BOSTON LAGER
## 30 ¦
             °--SAMUEL ADAMS SEASONAL
## 32 | °--DIAGEO GUINNESS USA
## 33 ¦
           |--SMIRNOFF ICE
## 34 ¦
            --GUINNESS DRAUGHT
```

```
## 35 ¦
             --SMIRNOFF ICE GREEN APPLE BITE
## 36 ¦
             --GUINNESS EXTRA STOUT
## 37 |
             --RED STRIPE
## 38
             --- SMIRNOFF ICE RASPBERRY BURST
## 39 ¦
             °--SMIRNOFF ICE PARTY PACK
## 40 |--MARK ANTHONY BRANDS INC
## 41
        °--MARK ANTHONY BRANDS INC
## 42 ¦
             |--MIKES HARD LEMONADE
## 43 ¦
            |--MIKES HARD SEASONAL
## 44 |
             --MIKES HARD CRANBERRY LEMONADE
## 45
             --MIKES HARD MANGO PUNCH
## 46 ¦
             °--MIKES HARD LIGHT LEMONADE
## 47 |--SABMILLER
## 48 | |--MILLERCOORS
            |--COORS LIGHT
## 49
## 50 ¦
        ## 51 |
            |--MILLER LITE
            --MILLER GENUINE DRAFT LIGHT 64
## 52
## 53 |
             --KEYSTONE LIGHT
## 54 ¦
            --MILWAUKEES BEST
|--COORS
## 56 ¦
             --ICEHOUSE
## 57
            --MILLER CHILL
## 58 !
            --MILLER GENUINE DRAFT
## 59 ¦
            |--FOSTERS LAGER
## 60
             --GEORGE KILLIANS IRISH RED LAG
## 61 ¦
             °--MOLSON CANADIAN
## 62 |
          °--TENTH & BLAKE BEER CO
## 63 |
             --BLUE MOON BELGIAN WHITE ALE
## 64
             °--BLUE MOON SEASONAL COLLECTION
## 65 |--CONSTELLATION BRANDS INC
## 66 | °--CROWN IMPORTS
## 67 |
            |--CORONA EXTRA
## 68 ¦
             --CORONA LIGHT
## 69 ¦
            --MODELO ESPECIAL
## 70 |
             --NEGRA MODELO
             °--SAINT PAULI GIRL
## 71 ¦
## 72 |--HEINEKEN USA INC
## 73 | °--HEINEKEN USA INC
## 74 ¦
            --HEINEKEN
## 75 |
             |--HEINEKEN PREMIUM LIGHT LAGER
## 76 ¦
            --TECATE
## 77 ¦
             --NEWCASTLE BROWN ALE
             °--DOS EQUIS XX AMBAR LAGER
## 78 ¦
## 79 |--SIERRA NEVADA BREWING CO
## 80 ¦
          °--SIERRA NEVADA BREWING CO
             °--SIERRA NEVADA PALE ALE
## 83 | °--E & J GALLO WNRY
## 84 ¦
            °--HORNSBYS AMBER DRAFT
## 85 °--S & P COMPANY
```

```
## 86
           °--PABST BREWING CO
## 87
               °--PABST BLUE RIBBON
```

#### LOS ANGELES

## 7

```
Algorithm name: S6.hierarchyTree(Market = 'LOS ANGELES',
                                 saveMarketHierarchy = T,
                                 saveAllBrandHierarchy = F,
                                 out algoRunTime = T )
Algorithm run time: 3.7478154 minute(s).
##
                                      levelName
## 1 Conglomerate
     |--ANHEUSER-BUSCH INBEV
## 2
## 3
          |--ANHEUSER-BUSCH INBEV
## 4
              |--BUD LIGHT
## 5
              --BUDWEISER
## 6
             |--NATURAL ICE
```

## 8 --ROLLING ROCK EXTRA PALE ## 9 |--STELLA ARTOIS LAGER

|--NATURAL LIGHT

- ## 10 ¦ |--BUD LIGHT GOLDEN WHEAT
- ## 11 ¦ |--BUD LIGHT LIME
- ## 12 | --BECKS
- ## 13 ¦ |--ODOULS
- ## 14 ¦ ! !--BUSCH
- |--BUSCH LIGHT ## 15 |
- |--LANDSHARK LAGER ## 16 ¦
- ## 17 | |--ODOULS AMBER
- ## 18 ¦ |--BACARDI SILVER MOJITO
- °--WILD BLUE ## 19 ¦
- ## 20 | °--MICHELOB BREWING CO
- ## 21 ¦ --MICHELOB ULTRA
- ## 22 | --MICHELOB ULTRA AMBER
- ## 23 ¦ --MICHELOB AMBER BOCK
- ## 24 ¦ --SHOCK TOP BELGIAN WHITE ALE
- ## 25 | --MICHELOB ULTRA LIME CACTUS
- °--MICHELOB ULTR POMEGRANAT RSPB ## 26 |
- ## 27 |--S & P COMPANY
- ## 28 ¦ \*--PABST BREWING CO
- ## 29 ¦ °--PABST BLUE RIBBON
- ## 30 |--SABMILLER
- ## 31 ¦ !--MILLERCOORS
- ## 32 | | |--COORS LIGHT
- ## 33 ¦ --KEYSTONE LIGHT
- ## 34 ¦ --MILLER GENUINE DRAFT
- ## 35 ¦ |--MILLER GENUINE DRAFT LIGHT 64
- ## 36 ¦ --MILLER HIGH LIFE
- ## 37 ! --MILLER LITE
- ## 38 ¦

```
## 39 | |
             |--FOSTERS LAGER
## 40 ¦
             !--COORS
## 41
              --ICEHOUSE
## 42
             |--MOLSON CANADIAN
## 43 ¦
             |--MILLER CHILL
## 44 ¦
              °--GEORGE KILLIANS IRISH RED LAG
## 45
          °--TENTH & BLAKE BEER CO
              |--BLUE MOON BELGIAN WHITE ALE
## 46 ¦
              *--BLUE MOON SEASONAL COLLECTION
## 48 |--CONSTELLATION BRANDS INC
## 49 ¦
         °--CROWN IMPORTS
## 50 ¦
              ---CORONA EXTRA
## 51 ¦
             |--CORONA LIGHT
              |--MODELO ESPECIAL
## 52
              |--SAINT PAULI GIRL
## 53
## 54 ¦
              °--NEGRA MODELO
## 55 \ --DIAGEO
         °--DIAGEO GUINNESS USA
## 56 ¦
## 57
              !--RED STRIPE
## 58 ¦
             |--SMIRNOFF ICE
## 59 ¦
              --GUINNESS DRAUGHT
## 60 ¦
              |--SMIRNOFF ICE PARTY PACK
## 61 !
              |--SMIRNOFF ICE GREEN APPLE BITE
## 62 |
              --SMIRNOFF ICE RASPBERRY BURST
              °--GUINNESS EXTRA STOUT
## 63 ¦
## 64 |--HEINEKEN USA INC
          *--HEINEKEN USA INC
## 65 ¦
## 66 ¦
             |--DOS EQUIS XX AMBAR LAGER
## 67
              --HEINEKEN
## 68
              --HEINEKEN PREMIUM LIGHT LAGER
## 69 ¦
              --NEWCASTLE BROWN ALE
## 70 ¦
              °--TECATE
## 71 |--BOSTON BEER CO
## 72 | °--BOSTON BEER CO
## 73 ¦
             --SAMUEL ADAMS BOSTON LAGER
## 74 ¦
              °--SAMUEL ADAMS SEASONAL
## 75 |--SIERRA NEVADA BREWING CO
## 76 |
         °--SIERRA NEVADA BREWING CO
## 77 ¦
              °--SIERRA NEVADA PALE ALE
## 78 |--MARK ANTHONY BRANDS INC
         *--MARK ANTHONY BRANDS INC
## 79 ¦
## 80 ¦
              --MIKES HARD LEMONADE
## 81 ¦
              --MIKES HARD CRANBERRY LEMONADE
## 82
              |--MIKES HARD LIGHT LEMONADE
## 83
              --MIKES HARD MANGO PUNCH
              °--MIKES HARD SEASONAL
## 84
## 85
     °--E & J GALLO WNRY
          °--E & J GALLO WNRY
## 86
## 87
             °--HORNSBYS AMBER DRAFT
```

### **SPOKANE**

```
Algorithm name: S6.hierarchyTree(Market = 'SPOKANE',
                                saveMarketHierarchy = T,
                                saveAllBrandHierarchy = F,
                               out_algoRunTime = T )
Algorithm run time: 1.1898625 minute(s).
##
                                    levelName
## 1
     Conglomerate
## 2
      --ANHEUSER-BUSCH INBEV
## 3
      | |--ANHEUSER-BUSCH INBEV
## 4
            |--BUD LIGHT
## 5
             --BUDWEISER
## 6
             |--BUD LIGHT LIME
## 7
            |--BUSCH
## 8
            |--NATURAL LIGHT
## 9
             --BUSCH LIGHT
## 10 ¦
             |--BACARDI SILVER MOJITO
## 11 |
             |--BUD LIGHT GOLDEN WHEAT
## 12 |
             --NATURAL ICE
## 13 ¦
             --ODOULS
## 14 |
             |--ODOULS AMBER
## 15 |
             --ROLLING ROCK EXTRA PALE
## 16 ¦
             |--WILD BLUE
## 17 ¦
             |--BECKS
## 18 ¦
            --STELLA ARTOIS LAGER
              °--LANDSHARK LAGER
## 19 ¦
## 20 |
          °--MICHELOB BREWING CO
## 21 ¦
             |--MICHELOB ULTRA
## 22 |
             |--MICHELOB ULTRA AMBER
## 23 |
             --MICHELOB ULTRA LIME CACTUS
              |--SHOCK TOP BELGIAN WHITE ALE
## 24 |
## 25 |
              |--MICHELOB AMBER BOCK
## 26 ¦
              °--MICHELOB ULTR POMEGRANAT RSPB
## 27 |--SABMILLER
## 28 ¦
         --MILLERCOORS
## 29 ¦
             --- COORS LIGHT
## 30 ¦
              --ICEHOUSE
             --KEYSTONE LIGHT
## 31 ¦
## 32 |
             --MILLER HIGH LIFE
## 33 ¦
             |--MILLER GENUINE DRAFT LIGHT 64
## 34 |
             --MILLER LITE
## 35 ¦
              --MILLER GENUINE DRAFT
## 36 |
             --COORS
## 37 |
             --GEORGE KILLIANS IRISH RED LAG
--MILLER CHILL
## 39 ¦
              |--FOSTERS LAGER
## 40 |
              --MOLSON CANADIAN
              °--MILWAUKEES BEST
## 41 ¦
## 42 |
          °--TENTH & BLAKE BEER CO
```

```
## 43 ¦
            --BLUE MOON BELGIAN WHITE ALE
             °--BLUE MOON SEASONAL COLLECTION
## 45 |--CONSTELLATION BRANDS INC
## 46 ¦
          °--CROWN IMPORTS
## 47 |
             --CORONA EXTRA
## 48 ¦
             |--CORONA LIGHT
## 49 ¦
             |--SAINT PAULI GIRL
## 50 ¦
             --MODELO ESPECIAL
## 51 ¦
             °--NEGRA MODELO
## 52 |--HEINEKEN USA INC
## 53 ¦
        °--HEINEKEN USA INC
## 54 ¦
            --HEINEKEN
## 55 ¦
            |--NEWCASTLE BROWN ALE
## 56 ¦
             |--DOS EQUIS XX AMBAR LAGER
## 57
             --TECATE
             °--HEINEKEN PREMIUM LIGHT LAGER
## 58 ¦
## 59 | --MARK ANTHONY BRANDS INC
## 60 ¦
        *--MARK ANTHONY BRANDS INC
             --MIKES HARD LEMONADE
## 61 ¦
## 62 |
             --MIKES HARD CRANBERRY LEMONADE
## 63 ¦
             --MIKES HARD MANGO PUNCH
## 64 ¦
             |--MIKES HARD SEASONAL
## 65 ¦
             °--MIKES HARD LIGHT LEMONADE
°--PABST BREWING CO
## 67 ¦
## 68 ¦
             °--PABST BLUE RIBBON
## 69 |--BOSTON BEER CO
## 70 | °--BOSTON BEER CO
## 71 |
             |--SAMUEL ADAMS SEASONAL
## 72 |
              °--SAMUEL ADAMS BOSTON LAGER
## 74 | °--DIAGEO GUINNESS USA
## 75 ¦
            |--SMIRNOFF ICE
             |--SMIRNOFF ICE GREEN APPLE BITE
## 76 ¦
## 77 |
            |--SMIRNOFF ICE PARTY PACK
## 78 |
            --SMIRNOFF ICE RASPBERRY BURST
## 79 |
             --GUINNESS DRAUGHT
## 80 !
             --RED STRIPE
             °--GUINNESS EXTRA STOUT
## 81 ¦
## 82 |--E & J GALLO WNRY
        °--E & J GALLO WNRY
## 83 ¦
## 84 ¦
             °--HORNSBYS AMBER DRAFT
## 85 °--SIERRA NEVADA BREWING CO
## 86
          °--SIERRA NEVADA BREWING CO
## 87
             °--SIERRA NEVADA PALE ALE
```

## **SYRACUSE**

```
Algorithm name: S6.hierarchyTree(Market = 'SYRACUSE', saveMarketHierarchy = T,
```

# saveAllBrandHierarchy = F, out\_algoRunTime = T )

Algorithm run time: 1.3298788 minute(s).

```
##
                                     levelName
## 1
     Conglomerate
## 2
      --ANHEUSER-BUSCH INBEV
## 3
          |--ANHEUSER-BUSCH INBEV
## 4
              |--BUD LIGHT
## 5
              --BUDWEISER
## 6
              --BUSCH
## 7
              --BUSCH LIGHT
## 8
              --NATURAL ICE
## 9
              |--NATURAL LIGHT
## 10
              --ROLLING ROCK EXTRA PALE
## 11
              --BUD LIGHT GOLDEN WHEAT
## 12
              --BUD LIGHT LIME
              --BECKS
## 13
              |--STELLA ARTOIS LAGER
## 14
## 15
              --LANDSHARK LAGER
## 16
              |--ODOULS
## 17
              --WILD BLUE
## 18
              |--BACARDI SILVER MOJITO
## 19
              °--ODOULS AMBER
          °--MICHELOB BREWING CO
## 20
## 21
             |--MICHELOB ULTRA
## 22
              --SHOCK TOP BELGIAN WHITE ALE
## 23 |
              |--MICHELOB ULTR POMEGRANAT RSPB
## 24
              --MICHELOB ULTRA LIME CACTUS
## 25
              --MICHELOB AMBER BOCK
## 26
              °--MICHELOB ULTRA AMBER
## 28
      °--DIAGEO GUINNESS USA
## 29 |
              --SMIRNOFF ICE
## 30 |
              --- SMIRNOFF ICE PARTY PACK
## 31 ¦
              |--SMIRNOFF ICE RASPBERRY BURST
## 32 |
              --GUINNESS DRAUGHT
## 33
              --- SMIRNOFF ICE GREEN APPLE BITE
## 34 ¦
              --GUINNESS EXTRA STOUT
## 35 |
              °--RED STRIPE
## 36
      |--SABMILLER
## 37 |
          --MILLERCOORS
## 38
              --COORS
## 39
              |--COORS LIGHT
## 40
              --GEORGE KILLIANS IRISH RED LAG
## 41
              --ICEHOUSE
## 42
              --KEYSTONE LIGHT
              |--MILLER GENUINE DRAFT
## 43 ¦
## 44
              |--MILLER GENUINE DRAFT LIGHT 64
## 45
              --MILLER HIGH LIFE
## 46 ¦
         | |--MILLER LITE
```

```
## 47 | | --MILWAUKEES BEST
## 49 ¦
             --MOLSON CANADIAN
            °--MILLER CHILL
## 50 |
## 51 | °--TENTH & BLAKE BEER CO
## 52 ¦
            --BLUE MOON BELGIAN WHITE ALE
## 53 ¦
             °--BLUE MOON SEASONAL COLLECTION
## 54 |--CONSTELLATION BRANDS INC
## 55 | °--CROWN IMPORTS
## 56 ¦
            ---CORONA EXTRA
## 57 ¦
            --CORONA LIGHT
## 58 ¦
            --SAINT PAULI GIRL
## 59 ¦
            |--MODELO ESPECIAL
             °--NEGRA MODELO
## 60 ¦
## 61 |--HEINEKEN USA INC
## 62 | °--HEINEKEN USA INC
## 63 ¦
           --HEINEKEN
## 64 ¦
            --HEINEKEN PREMIUM LIGHT LAGER
            --NEWCASTLE BROWN ALE
## 65 ¦
## 66 ¦
            --DOS EQUIS XX AMBAR LAGER
             °--TECATE
## 67 ¦
## 68 |--BOSTON BEER CO
## 69 | °--BOSTON BEER CO
## 70 ¦
            --SAMUEL ADAMS BOSTON LAGER
## 71 ¦
            °--SAMUEL ADAMS SEASONAL
## 72 | --MARK ANTHONY BRANDS INC
## 73 | °--MARK ANTHONY BRANDS INC
## 74 |
            --MIKES HARD LEMONADE
## 75 |
            --MIKES HARD CRANBERRY LEMONADE
## 76 ¦
            --MIKES HARD LIGHT LEMONADE
## 77 ¦
            --MIKES HARD MANGO PUNCH
## 78 ¦
            °--MIKES HARD SEASONAL
## 80 | °--PABST BREWING CO
## 81 ¦
             °--PABST BLUE RIBBON
## 82 |--SIERRA NEVADA BREWING CO
## 83 ¦
        °--SIERRA NEVADA BREWING CO
## 84 ¦
            °--SIERRA NEVADA PALE ALE
## 85 °--E & J GALLO WNRY
        °--E & J GALLO WNRY
## 86
## 87
            °--HORNSBYS AMBER DRAFT
```

## HOUSTON

Algorithm run time: 1.6886817 minute(s).

```
##
                                    levelName
## 1 Conglomerate
## 2
      --SABMILLER
## 3
          --MILLERCOORS
## 4
          ## 5
              --MILLER LITE
## 6
              --COORS LIGHT
## 7
              --KEYSTONE LIGHT
## 8
             |--MILLER GENUINE DRAFT LIGHT 64
## 9
              |--ICEHOUSE
## 10
              |--MILLER CHILL
## 11 ¦
             --MILWAUKEES BEST
## 12 ¦
             --COORS
## 13
             --MILLER GENUINE DRAFT
## 14
             |--FOSTERS LAGER
## 15 ¦
            --MOLSON CANADIAN
## 16 ¦
              °--GEORGE KILLIANS IRISH RED LAG
          °--TENTH & BLAKE BEER CO
## 17
## 18
              --BLUE MOON BELGIAN WHITE ALE
## 19 ¦
              °--BLUE MOON SEASONAL COLLECTION
## 20 |--HEINEKEN USA INC
## 21 |
         °--HEINEKEN USA INC
## 22 |
             !--HEINEKEN
## 23 |
              |--TECATE
              --HEINEKEN PREMIUM LIGHT LAGER
## 24 |
## 25
              |--DOS EQUIS XX AMBAR LAGER
## 26 ¦
              °--NEWCASTLE BROWN ALE
## 27 | -- ANHEUSER-BUSCH INBEV
         |--ANHEUSER-BUSCH INBEV
## 28 ¦
## 29
             |--BUSCH
## 30 ¦
             |--BUSCH LIGHT
## 31 ¦
            |--NATURAL LIGHT
## 32 ¦
             |--BUD LIGHT
## 33
             |--BUD LIGHT LIME
## 34 |
             |--BUDWEISER
             !--BUD LIGHT GOLDEN WHEAT
## 35
              --BACARDI SILVER MOJITO
## 36
## 37
             |--NATURAL ICE
             --ODOULS
## 38 ¦
## 39 ¦
             --STELLA ARTOIS LAGER
              |--ODOULS AMBER
## 40
## 41
             --BECKS
## 42
             --ROLLING ROCK EXTRA PALE
## 43 ¦
              |--LANDSHARK LAGER
## 44
              •--WILD BLUE
          °--MICHELOB BREWING CO
## 45
## 46 |
              --MICHELOB ULTRA
## 47 |
              |--MICHELOB ULTRA LIME CACTUS
## 48
             --MICHELOB ULTR POMEGRANAT RSPB
## 49
             --MICHELOB AMBER BOCK
## 50 ¦
             --MICHELOB ULTRA AMBER
```

```
## 51 ¦
            °--SHOCK TOP BELGIAN WHITE ALE
## 52 !--CONSTELLATION BRANDS INC
## 53 | °--CROWN IMPORTS
## 54 ¦
            |--CORONA EXTRA
## 55 ¦
            --MODELO ESPECIAL
## 56 ¦
             |--CORONA LIGHT
## 57
             --NEGRA MODELO
## 58 ¦
             °--SAINT PAULI GIRL
## 60 ¦
          °--DIAGEO GUINNESS USA
## 61 ¦
            |--SMIRNOFF ICE
            |--SMIRNOFF ICE GREEN APPLE BITE
## 62 |
## 63 ¦
            |--RED STRIPE
## 64 ¦
             --GUINNESS DRAUGHT
             --GUINNESS EXTRA STOUT
## 65
## 66 ¦
            --SMIRNOFF ICE PARTY PACK
## 67 ¦
             °--SMIRNOFF ICE RASPBERRY BURST
## 68 |--MARK ANTHONY BRANDS INC
## 69 | °--MARK ANTHONY BRANDS INC
## 70 |
            --MIKES HARD LEMONADE
## 71 ¦
             --MIKES HARD SEASONAL
## 72 ¦
             --MIKES HARD CRANBERRY LEMONADE
## 73 ¦
             --MIKES HARD LIGHT LEMONADE
## 74 !
             °--MIKES HARD MANGO PUNCH
## 75 |--SIERRA NEVADA BREWING CO
## 76 | °--SIERRA NEVADA BREWING CO
## 77 ¦
             °--SIERRA NEVADA PALE ALE
## 79 | °--PABST BREWING CO
## 80 ¦
            °--PABST BLUE RIBBON
## 81 |--BOSTON BEER CO
## 82 | °--BOSTON BEER CO
## 83 ¦
            |--SAMUEL ADAMS SEASONAL
          °--SAMUEL ADAMS BOSTON LAGER
## 84 ¦
## 85 °--E & J GALLO WNRY
        °--E & J GALLO WNRY
## 86
## 87
            °--HORNSBYS AMBER DRAFT
```

```
Algorithm run time: 1.0551922 minute(s).
## NULL
##
## Call:
## lm(formula = model.lm.Brands, data = D8.2010_aggregate_data.CHICAGO)
## Residuals:
        Min
                  1Q
                       Median
                                     3Q
                                             Max
                       0.0222
## -10.2506 -0.4275
                                 0.5291
                                          8.4816
##
## Coefficients:
##
                                      Estimate Std. Error t value Pr(>|t|)
## p2_Wmean
                                                  0.01112 121.03
                                                                     <2e-16 ***
                                       1.34640
## BACARDI_SILVER_MOJITO
                                     -27.31453
                                                  0.23983 -113.89
                                                                     <2e-16 ***
## BACARDI_SILVER_MOJITO_pr
                                     -28.09623
                                                  0.21252 -132.21
                                                                     <2e-16 ***
## BECKS
                                     -26.57425
                                                  0.24581 -108.11
                                                                     <2e-16 ***
## BECKS_pr
                                     -24.89206
                                                  0.23334 -106.68
                                                                     <2e-16 ***
## BLUE_MOON_BELGIAN_WHITE_ALE
                                     -27.77645
                                                  0.25238 -110.06
                                                                     <2e-16 ***
## BLUE_MOON_BELGIAN_WHITE_ALE_pr
                                     -25.37153
                                                  0.23842 -106.42
                                                                     <2e-16 ***
## BUD_LIGHT
                                     -17.75086
                                                  0.21752 -81.61
                                                                     <2e-16 ***
## BUD LIGHT pr
                                     -15.35463
                                                  0.20880 -73.54
                                                                     <2e-16 ***
## BUD_LIGHT_GOLDEN_WHEAT
                                     -25.08873
                                                  0.23208 -108.11
                                                                     <2e-16 ***
## BUD LIGHT GOLDEN WHEAT pr
                                     -25.09591
                                                  0.22267 -112.70
                                                                     <2e-16 ***
## BUD_LIGHT_LIME
                                     -23.34629
                                                  0.23149 -100.85
                                                                     <2e-16 ***
## BUD LIGHT LIME pr
                                                  0.22588 -106.39
                                                                     <2e-16 ***
                                     -24.03242
## BUDWEISER
                                     -18.39204
                                                  0.21754
                                                           -84.55
                                                                     <2e-16 ***
## BUDWEISER_pr
                                     -16.01043
                                                  0.20854
                                                           -76.78
                                                                     <2e-16 ***
                                                  0.20474
                                                           -73.58
                                                                     <2e-16 ***
## BUSCH
                                     -15.06473
## BUSCH_pr
                                     -14.10067
                                                  0.20086
                                                           -70.20
                                                                     <2e-16 ***
## BUSCH_LIGHT
                                     -14.06983
                                                  0.20349
                                                           -69.14
                                                                     <2e-16 ***
## BUSCH_LIGHT_pr
                                     -13.99994
                                                  0.20103
                                                           -69.64
                                                                     <2e-16 ***
## COORS
                                                           -89.75
                                                                     <2e-16 ***
                                     -18.86455
                                                  0.21018
## COORS_pr
                                     -17.72638
                                                  0.20674 -85.74
                                                                     <2e-16 ***
## COORS_LIGHT
                                     -17.88016
                                                  0.21632 -82.65
                                                                     <2e-16 ***
## COORS_LIGHT_pr
                                     -15.79337
                                                  0.20899 - 75.57
                                                                     <2e-16 ***
## CORONA_EXTRA
                                     -24.41232
                                                  0.24300 -100.46
                                                                     <2e-16 ***
## CORONA_EXTRA_pr
                                     -21.57021
                                                  0.23051 -93.58
                                                                     <2e-16 ***
## CORONA LIGHT
                                     -24.55499
                                                  0.23842 -102.99
                                                                     <2e-16 ***
                                                                     <2e-16 ***
## CORONA_LIGHT_pr
                                     -23.33672
                                                  0.23049 -101.25
## DOS EQUIS XX AMBAR LAGER
                                     -27.79435
                                                  0.23657 - 117.49
                                                                     <2e-16 ***
## DOS_EQUIS_XX_AMBAR_LAGER_pr
                                                  0.22794 -114.08
                                                                     <2e-16 ***
                                     -26.00435
## FOSTERS LAGER
                                     -25.17514
                                                  0.23391 -107.62
                                                                     <2e-16 ***
## FOSTERS_LAGER_pr
                                     -25.94796
                                                  0.22266 -116.54
                                                                     <2e-16 ***
## GEORGE_KILLIANS_IRISH_RED_LAG
                                     -25.59290
                                                  0.23380 -109.47
                                                                     <2e-16 ***
## GEORGE_KILLIANS_IRISH_RED_LAG_pr -26.26357
                                                  0.22703 -115.68
                                                                     <2e-16 ***
## GUINNESS DRAUGHT
                                     -28.77614
                                                  0.25601 - 112.40
                                                                     <2e-16 ***
                                                  0.24487 -112.95
## GUINNESS_DRAUGHT_pr
                                     -27.65899
                                                                     <2e-16 ***
## GUINNESS_EXTRA_STOUT
                                     -30.44584
                                                  0.25890 -117.59
                                                                     <2e-16 ***
## GUINNESS_EXTRA_STOUT_pr
                                     -28.76653
                                                  0.23702 -121.37
                                                                     <2e-16 ***
## HEINEKEN
                                     -25.88321
                                                  0.24783 -104.44
                                                                     <2e-16 ***
```

```
## HEINEKEN_pr
                                     -23.73228
                                                  0.23775 -99.82
                                                                     <2e-16 ***
## HEINEKEN_PREMIUM_LIGHT_LAGER
                                     -27.50050
                                                  0.24890 -110.49
                                                                     <2e-16 ***
## HEINEKEN_PREMIUM_LIGHT_LAGER_pr
                                     -25.28436
                                                  0.23756 -106.44
                                                                     <2e-16 ***
## HORNSBYS_AMBER_DRAFT
                                                  0.25018 -123.05
                                                                     <2e-16 ***
                                     -30.78283
## HORNSBYS AMBER DRAFT pr
                                     -27.60990
                                                  0.19375 -142.50
                                                                     <2e-16 ***
## ICEHOUSE
                                     -15.61185
                                                  0.20675 -75.51
                                                                     <2e-16 ***
## ICEHOUSE pr
                                     -15.59185
                                                  0.20239 -77.04
                                                                     <2e-16 ***
                                                  0.20088 -72.93
                                                                     <2e-16 ***
## KEYSTONE_LIGHT
                                     -14.65079
## KEYSTONE LIGHT pr
                                     -17.44450
                                                  0.19881 -87.74
                                                                     <2e-16 ***
                                                  0.24042 -113.35
                                     -27.25175
                                                                     <2e-16 ***
## LANDSHARK_LAGER
## LANDSHARK_LAGER_pr
                                     -28.12353
                                                  0.21422 -131.28
                                                                     <2e-16 ***
## MICHELOB_AMBER_BOCK
                                     -24.44202
                                                  0.22497 - 108.64
                                                                     <2e-16 ***
## MICHELOB_AMBER_BOCK_pr
                                     -24.86783
                                                  0.21484 -115.75
                                                                     <2e-16 ***
                                                                     <2e-16 ***
## MICHELOB_ULTR_POMEGRANAT_RSPB
                                     -25.57732
                                                  0.22623 -113.06
## MICHELOB_ULTR_POMEGRANAT_RSPB_pr -27.51728
                                                  0.19375 -142.03
                                                                     <2e-16 ***
## MICHELOB_ULTRA
                                     -19.99933
                                                  0.21729 - 92.04
                                                                     <2e-16 ***
## MICHELOB_ULTRA_pr
                                                  0.21240 -92.80
                                                                     <2e-16 ***
                                     -19.70999
## MICHELOB_ULTRA_AMBER
                                     -21.89564
                                                  0.21422 - 102.21
                                                                     <2e-16 ***
## MICHELOB_ULTRA_AMBER_pr
                                     -22.69450
                                                  0.20850 -108.85
                                                                     <2e-16 ***
## MICHELOB_ULTRA_LIME_CACTUS
                                     -25.34542
                                                  0.22598 -112.16
                                                                     <2e-16 ***
## MICHELOB_ULTRA_LIME_CACTUS_pr
                                                  0.19389 -141.59
                                                                     <2e-16 ***
                                     -27.45200
## MILLER CHILL
                                     -23.19416
                                                  0.22451 -103.31
                                                                     <2e-16 ***
## MILLER CHILL pr
                                     -22.65178
                                                  0.21788 - 103.97
                                                                     <2e-16 ***
## MILLER GENUINE DRAFT
                                     -18.37756
                                                  0.21710 -84.65
                                                                     <2e-16 ***
## MILLER_GENUINE_DRAFT_pr
                                                  0.20824 -75.14
                                                                     <2e-16 ***
                                     -15.64603
## MILLER_GENUINE_DRAFT_LIGHT_64
                                                           -85.89
                                                                     <2e-16 ***
                                     -18.49073
                                                  0.21529
## MILLER_GENUINE_DRAFT_LIGHT_64_pr -15.99343
                                                  0.20784
                                                           -76.95
                                                                     <2e-16 ***
## MILLER HIGH LIFE
                                                  0.20894
                                                           -75.78
                                     -15.83356
                                                                     <2e-16 ***
                                                           -67.38
                                                                     <2e-16 ***
## MILLER_HIGH_LIFE_pr
                                     -13.67872
                                                  0.20302
## MILLER_LITE
                                     -17.45256
                                                  0.21947
                                                           -79.52
                                                                     <2e-16 ***
                                                           -70.03
                                                  0.20988
                                                                     <2e-16 ***
## MILLER_LITE_pr
                                     -14.69793
## MILWAUKEES_BEST
                                     -18.00102
                                                  0.20208 -89.08
                                                                     <2e-16 ***
                                                                     <2e-16 ***
## MILWAUKEES_BEST_pr
                                     -23.71148
                                                  0.19457 - 121.87
## MODELO_ESPECIAL
                                     -23.92907
                                                  0.23918 -100.05
                                                                     <2e-16 ***
## MODELO_ESPECIAL_pr
                                     -23.45753
                                                  0.23220 -101.02
                                                                     <2e-16 ***
## MOLSON_CANADIAN
                                     -23.01655
                                                  0.21734 - 105.90
                                                                     <2e-16 ***
## MOLSON_CANADIAN_pr
                                     -25.56175
                                                  0.20016 - 127.71
                                                                     <2e-16 ***
## NATURAL_ICE
                                     -16.66998
                                                  0.20432 -81.59
                                                                     <2e-16 ***
## NATURAL ICE pr
                                     -18.31597
                                                  0.19845 -92.30
                                                                     <2e-16 ***
                                                  0.20045 -79.43
                                                                     <2e-16 ***
## NATURAL_LIGHT
                                     -15.92225
## NATURAL LIGHT pr
                                     -17.40216
                                                  0.19996 -87.03
                                                                     <2e-16 ***
## NEGRA_MODELO
                                                  0.24682 -111.69
                                                                     <2e-16 ***
                                     -27.56786
## NEGRA MODELO pr
                                     -27.35527
                                                  0.23183 -118.00
                                                                     <2e-16 ***
## NEWCASTLE_BROWN_ALE
                                     -29.30577
                                                  0.25531 -114.79
                                                                     <2e-16 ***
## NEWCASTLE_BROWN_ALE_pr
                                     -28.17612
                                                  0.24570 - 114.67
                                                                     <2e-16 ***
## ODOULS
                                     -19.37396
                                                  0.21369 - 90.67
                                                                     <2e-16 ***
## ODOULS_pr
                                     -23.68842
                                                  0.20372 -116.28
                                                                     <2e-16 ***
                                                                     <2e-16 ***
## ODOULS_AMBER
                                     -21.43677
                                                  0.21559 -99.44
## ODOULS_AMBER_pr
                                     -25.81479
                                                  0.19758 -130.65
                                                                     <2e-16 ***
## RED_STRIPE
                                     -28.92117
                                                  0.25182 -114.85
                                                                     <2e-16 ***
                                                  0.22765 -121.75
## RED_STRIPE_pr
                                     -27.71686
                                                                     <2e-16 ***
```

```
## SAINT_PAULI_GIRL
                               -24.98479
                                          0.23185 -107.76 <2e-16 ***
## SAINT_PAULI_GIRL_pr
                               -26.29784 0.21564 -121.95 <2e-16 ***
                               -29.12250 0.24973 -116.62 <2e-16 ***
## SMIRNOFF_ICE
## SMIRNOFF_ICE_pr
                               -28.42976 0.24171 -117.62 <2e-16 ***
## SMIRNOFF ICE GREEN APPLE BITE -30.66857 0.25314 -121.15 <2e-16 ***
## SMIRNOFF_ICE_GREEN_APPLE_BITE_pr -30.34997 0.23156 -131.07 <2e-16 ***
                               -31.07468 0.25549 -121.63
                                                         <2e-16 ***
## SMIRNOFF ICE RASPBERRY BURST
## SMIRNOFF_ICE_RASPBERRY_BURST_pr -30.10664 0.23375 -128.80 <2e-16 ***
## TECATE
                               -20.85153 0.21650 -96.31 <2e-16 ***
## TECATE_pr
                               -30.41110
                                          0.24539 -123.93 <2e-16 ***
## WILD BLUE
                               -27.57698 0.19374 -142.34
                                                          <2e-16 ***
## WILD_BLUE_pr
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 1.397 on 5099 degrees of freedom
## Multiple R-squared: 0.9864, Adjusted R-squared: 0.9862
## F-statistic: 3670 on 101 and 5099 DF, p-value: < 2.2e-16
##
## Call:
## lm(formula = log(share) - log(outshr) ~ 0 + p2_Wmean + ABV +
      Calories_oz + Carbs_oz + USA + Mexico, data = D8.2010_aggregate_data.CHICAGO)
##
## Residuals:
              1Q Median
## Min
                               3Q
## -21.0982 -3.1216 0.0095 2.7711 8.6071
## Coefficients:
##
      Estimate Std. Error t value Pr(>|t|)
## p2_Wmean 0.63924 0.01793 35.655 < 2e-16 ***
      -1.54058 0.09725 -15.841 < 2e-16 ***
## Carbs_oz -0.90292 0.24581 -3.673 0.000242 ***
        -1.48700 0.14855 -10.010 < 2e-16 ***
## USA
## Mexico -0.50063 0.23390 -2.140 0.032370 *
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 4.862 on 5194 degrees of freedom
## Multiple R-squared: 0.8326, Adjusted R-squared: 0.8324
## F-statistic: 4306 on 6 and 5194 DF, p-value: < 2.2e-16
```

```
## NULL
##
## Call:
## lm(formula = model.lm.Brands, data = D8.2010 aggregate data.DALLASTX)
## Residuals:
##
        Min
                  1Q
                       Median
                                     3Q
                                             Max
## -1.71924 -0.16851 0.00239 0.17564 2.37211
## Coefficients:
##
                                    Estimate Std. Error t value Pr(>|t|)
## p2_Wmean
                                   -0.096055
                                               0.009066 - 10.60
                                                                   <2e-16 ***
## BACARDI_SILVER_MOJITO
                                   -8.195708
                                               0.126376
                                                         -64.85
                                                                   <2e-16 ***
                                   -7.474368
                                               0.129580
                                                         -57.68
                                                                   <2e-16 ***
## BECKS
## BLUE_MOON_BELGIAN_WHITE_ALE
                                                         -49.43
                                   -6.624251
                                               0.134017
                                                                   <2e-16 ***
                                                         -34.16
## BUD LIGHT
                                   -3.480477
                                               0.101900
                                                                   <2e-16 ***
## BUD_LIGHT_GOLDEN_WHEAT
                                   -8.290667
                                               0.119517
                                                         -69.37
                                                                   <2e-16 ***
## BUD LIGHT LIME
                                   -6.009260
                                               0.117847
                                                         -50.99
                                                                   <2e-16 ***
## BUDWEISER
                                   -4.680685
                                               0.100454
                                                         -46.59
                                                                   <2e-16 ***
## BUSCH
                                                         -74.63
                                   -6.439874
                                               0.086290
                                                                   <2e-16 ***
                                               0.085599 -77.82
## BUSCH_LIGHT
                                                                   <2e-16 ***
                                   -6.661263
## COORS
                                   -6.076161
                                               0.098998 -61.38
                                                                   <2e-16 ***
## COORS LIGHT
                                   -3.835600
                                               0.104053 -36.86
                                                                   <2e-16 ***
## CORONA_EXTRA
                                   -4.955803
                                               0.138883
                                                         -35.68
                                                                   <2e-16 ***
## CORONA_LIGHT
                                   -6.291180
                                               0.130058
                                                         -48.37
                                                                   <2e-16 ***
## DOS_EQUIS_XX_AMBAR_LAGER
                                               0.126242 -59.78
                                   -7.546253
                                                                   <2e-16 ***
## FOSTERS_LAGER
                                   -7.589084
                                               0.117370 -64.66
                                                                   <2e-16 ***
                                               0.123659 -68.58
## GEORGE_KILLIANS_IRISH_RED_LAG
                                   -8.480264
                                                                   <2e-16 ***
## GUINNESS_DRAUGHT
                                   -7.461228
                                               0.159413
                                                         -46.80
                                                                   <2e-16 ***
## GUINNESS_EXTRA_STOUT
                                   -7.481834
                                               0.153704
                                                         -48.68
                                                                   <2e-16 ***
                                   -5.382628
                                               0.136378
                                                         -39.47
                                                                   <2e-16 ***
## HEINEKEN
                                   -7.093940
                                               0.134721
                                                         -52.66
                                                                   <2e-16 ***
## HEINEKEN_PREMIUM_LIGHT_LAGER
## HORNSBYS AMBER DRAFT
                                                         -67.20
                                   -9.054146
                                               0.134742
                                                                   <2e-16 ***
## ICEHOUSE
                                   -9.763887
                                               0.086880 -112.38
                                                                   <2e-16 ***
## KEYSTONE LIGHT
                                   -4.993239
                                               0.087748 -56.90
                                                                   <2e-16 ***
                                                         -58.19
## LANDSHARK_LAGER
                                   -8.130068
                                               0.139705
                                                                   <2e-16 ***
                                                         -83.24
## MICHELOB_AMBER_BOCK
                                   -9.769397
                                               0.117370
                                                                   <2e-16 ***
## MICHELOB_ULTR_POMEGRANAT_RSPB
                                               0.120366
                                                         -74.33
                                   -8.946312
                                                                   <2e-16 ***
## MICHELOB ULTRA
                                   -5.309074
                                               0.112323
                                                         -47.27
                                                                   <2e-16 ***
## MICHELOB_ULTRA_AMBER
                                                         -72.21
                                   -8.349850
                                               0.115629
                                                                   <2e-16 ***
## MICHELOB_ULTRA_LIME_CACTUS
                                   -7.928338
                                               0.121036 -65.50
                                                                   <2e-16 ***
## MILLER CHILL
                                   -7.765241
                                               0.107723 -72.08
                                                                   <2e-16 ***
## MILLER_GENUINE_DRAFT
                                   -6.648980
                                               0.101072 -65.78
                                                                   <2e-16 ***
## MILLER_GENUINE_DRAFT_LIGHT_64
                                   -6.315806
                                               0.101216
                                                         -62.40
                                                                   <2e-16 ***
                                               0.090239
## MILLER_HIGH_LIFE
                                   -5.874304
                                                         -65.10
                                                                   <2e-16 ***
## MILLER_LITE
                                   -3.756304
                                               0.103270
                                                         -36.37
                                                                   <2e-16 ***
## MILWAUKEES_BEST
                                   -7.851340
                                               0.081127
                                                         -96.78
                                                                   <2e-16 ***
## MODELO_ESPECIAL
                                   -6.207893
                                               0.121540
                                                         -51.08
                                                                   <2e-16 ***
## MOLSON_CANADIAN
                                   -9.543903
                                                        -77.32
                                               0.123431
                                                                   <2e-16 ***
## NATURAL_ICE
                                   -9.299987
                                               0.080509 -115.52
                                                                   <2e-16 ***
```

```
## NATURAL_LIGHT
                           -4.903899
                                      0.082059 -59.76 <2e-16 ***
## NEGRA MODELO
                           -7.668594 0.135934 -56.41 <2e-16 ***
                           -7.698933 0.152290 -50.55 <2e-16 ***
## NEWCASTLE_BROWN_ALE
## ODOULS
                            -7.632625 0.105924 -72.06 <2e-16 ***
## ODOULS AMBER
                           -9.285525 0.103510 -89.71 <2e-16 ***
## RED_STRIPE
                            -7.856512 0.137695 -57.06 <2e-16 ***
                            -8.160562 0.128313 -63.60 <2e-16 ***
## SAINT PAULI GIRL
## SMIRNOFF_ICE
                            -7.333270 0.142292 -51.54 <2e-16 ***
## SMIRNOFF_ICE_GREEN_APPLE_BITE -8.407337 0.146106 -57.54 <2e-16 ***
## SMIRNOFF_ICE_RASPBERRY_BURST -10.003076 0.145343 -68.82 <2e-16 ***
                            -6.604225 0.112043 -58.94 <2e-16 ***
## TECATE
## WILD_BLUE
                            ## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 0.313 on 2549 degrees of freedom
## Multiple R-squared: 0.9987, Adjusted R-squared: 0.9987
## F-statistic: 3.816e+04 on 51 and 2549 DF, p-value: < 2.2e-16
##
## Call:
## lm(formula = log(share) - log(outshr) ~ 0 + p2_Wmean + ABV +
      Calories_oz + Carbs_oz + USA + Mexico, data = D8.2010_aggregate_data.DALLASTX)
##
## Residuals:
            1Q Median
    Min
                           3Q
## -4.6156 -1.0493 -0.2586 0.9829 10.5768
## Coefficients:
##
            Estimate Std. Error t value Pr(>|t|)
## p2_Wmean
          -0.43421 0.01113 -38.996 < 2e-16 ***
           ## Carbs_oz -0.24128 0.11507 -2.097 0.036106 *
## USA
           -1.11315 0.06889 -16.159 < 2e-16 ***
## Mexico
           ## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 1.626 on 2594 degrees of freedom
## Multiple R-squared: 0.9641, Adjusted R-squared: 0.964
## F-statistic: 1.161e+04 on 6 and 2594 DF, p-value: < 2.2e-16
```

```
## NULL
##
## lm(formula = model.lm.Brands, data = D8.2010 aggregate data.LOSANGELES)
## Residuals:
##
      Min
                1Q Median
                                30
                                       Max
## -3.8781 -0.1526 0.0059 0.1635 1.5976
## Coefficients:
##
                                 Estimate Std. Error t value Pr(>|t|)
## p2_Wmean
                                             0.01190 -34.199 < 2e-16 ***
                                 -0.40711
                                             0.19420 -20.618 < 2e-16 ***
## BACARDI_SILVER_MOJITO
                                 -4.00395
                                 -2.30245
                                             0.16070 -14.328 < 2e-16 ***
## BECKS
## BLUE_MOON_BELGIAN_WHITE_ALE
                                             0.19462 -3.218 0.00131 **
                                 -0.62632
                                  0.27836
                                             0.12836
                                                       2.169 0.03021 *
## BUD LIGHT
                                             0.15008 -24.750 < 2e-16 ***
## BUD_LIGHT_GOLDEN_WHEAT
                                 -3.71454
## BUD LIGHT LIME
                                 -2.12371
                                             0.15137 -14.030 < 2e-16 ***
## BUDWEISER
                                 -0.79971
                                             0.12711 -6.292 3.69e-10 ***
## BUSCH
                                             0.10902 -49.503 < 2e-16 ***
                                 -5.39700
                                             0.09927 -79.827 < 2e-16 ***
## BUSCH_LIGHT
                                 -7.92431
                                             0.11574 -25.712 < 2e-16 ***
## COORS
                                 -2.97580
## COORS LIGHT
                                -0.10419
                                             0.13120 -0.794 0.42718
## CORONA_EXTRA
                                 1.20592
                                             0.18125
                                                       6.653 3.50e-11 ***
## CORONA_LIGHT
                                 -1.33400
                                             0.16539
                                                     -8.066 1.11e-15 ***
## DOS_EQUIS_XX_AMBAR_LAGER
                                 -3.27495
                                             0.15655 -20.919 < 2e-16 ***
## FOSTERS_LAGER
                                 -3.31914
                                             0.14268 -23.263 < 2e-16 ***
## GEORGE_KILLIANS_IRISH_RED_LAG -4.23149
                                             0.16370 -25.848 < 2e-16 ***
## GUINNESS_DRAUGHT
                                 -1.35102
                                             0.20260 -6.669 3.16e-11 ***
## GUINNESS_EXTRA_STOUT
                                 -2.39933
                                             0.20815 -11.527 < 2e-16 ***
## HEINEKEN
                                  0.31335
                                             0.18291
                                                       1.713 0.08681 .
## HEINEKEN_PREMIUM_LIGHT_LAGER
                                             0.16964 -11.027 < 2e-16 ***
                                -1.87055
## HORNSBYS AMBER DRAFT
                                             0.15337 -32.092 < 2e-16 ***
                                 -4.92179
## ICEHOUSE
                                 -6.51522
                                             0.11575 -56.288 < 2e-16 ***
## KEYSTONE LIGHT
                                 -3.58659
                                             0.09190 -39.026 < 2e-16 ***
                                             0.17653 -23.013 < 2e-16 ***
## LANDSHARK_LAGER
                                 -4.06245
                                             0.15179 -29.570 < 2e-16 ***
## MICHELOB_AMBER_BOCK
                                 -4.48829
## MICHELOB_ULTR_POMEGRANAT_RSPB -7.04618
                                             0.14769 -47.708 < 2e-16 ***
## MICHELOB ULTRA
                                -2.36710
                                             0.13571 -17.443 < 2e-16 ***
## MICHELOB ULTRA AMBER
                                             0.13863 -38.644 < 2e-16 ***
                                 -5.35737
## MICHELOB_ULTRA_LIME_CACTUS
                                 -5.85719
                                             0.15906 -36.824 < 2e-16 ***
## MILLER CHILL
                                 -5.27525
                                             0.13283 -39.714 < 2e-16 ***
## MILLER_GENUINE_DRAFT
                                 -1.92508
                                             0.12692 -15.168 < 2e-16 ***
                                             0.12675 -25.611
                                                             < 2e-16 ***
## MILLER_GENUINE_DRAFT_LIGHT_64 -3.24612
## MILLER_HIGH_LIFE
                                 -2.89852
                                             0.10815 -26.800 < 2e-16 ***
## MILLER_LITE
                                 -1.24879
                                             0.12693 -9.838 < 2e-16 ***
## MILWAUKEES_BEST
                                -6.07909
                                             0.08168 -74.424 < 2e-16 ***
## MODELO_ESPECIAL
                                 -1.14718
                                             0.15384
                                                     -7.457 1.21e-13 ***
## MOLSON_CANADIAN
                                -5.56918
                                             0.14490 -38.434 < 2e-16 ***
## NATURAL_ICE
                                 -3.96291
                                             0.09315 -42.542 < 2e-16 ***
```

```
## NATURAL_LIGHT
                            -3.00992
                                       0.09382 -32.081 < 2e-16 ***
## NEGRA MODELO
                            -2.54954
                                       0.17041 -14.961 < 2e-16 ***
                            0.30056
                                       0.20645 1.456 0.14555
## NEWCASTLE_BROWN_ALE
## ODOULS
                             -3.56522 0.13493 -26.422 < 2e-16 ***
## ODOULS AMBER
                           -5.34851 0.14071 -38.011 < 2e-16 ***
## RED_STRIPE
                           -2.14689 0.18395 -11.671 < 2e-16 ***
                             -3.79479 0.15448 -24.565 < 2e-16 ***
## SAINT PAULI GIRL
## SMIRNOFF_ICE
                             -2.11686 0.18430 -11.486 < 2e-16 ***
## SMIRNOFF_ICE_GREEN_APPLE_BITE -3.06362 0.18879 -16.228 < 2e-16 ***
## SMIRNOFF_ICE_RASPBERRY_BURST -3.38030 0.18979 -17.811 < 2e-16 ***
                             -1.34915 0.12488 -10.803 < 2e-16 ***
## TECATE
## WILD_BLUE
                             -4.73019 0.18702 -25.293 < 2e-16 ***
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 0.3462 on 2549 degrees of freedom
## Multiple R-squared: 0.9982, Adjusted R-squared: 0.9982
## F-statistic: 2.843e+04 on 51 and 2549 DF, p-value: < 2.2e-16
##
## Call:
## lm(formula = log(share) - log(outshr) ~ 0 + p2_Wmean + ABV +
      Calories_oz + Carbs_oz + USA + Mexico, data = D8.2010_aggregate_data.LOSANGELES)
##
## Residuals:
             1Q Median
    Min
                            3Q
## -8.2042 -1.5035 -0.1037 1.0533 4.3856
## Coefficients:
##
             Estimate Std. Error t value Pr(>|t|)
## p2_Wmean
           -0.39395 0.01259 -31.291 < 2e-16 ***
           ## Carbs_oz 0.45529 0.13597 3.349 0.000824 ***
      -1.88873 0.08195 -23.048 < 2e-16 ***
## USA
## Mexico 0.51096 0.13106 3.899 9.92e-05 ***
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 1.931 on 2594 degrees of freedom
## Multiple R-squared: 0.9445, Adjusted R-squared: 0.9443
## F-statistic: 7351 on 6 and 2594 DF, p-value: < 2.2e-16
```