|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | YAS | WRN | AHO | SPFH | CMN | LAF | LASS | PWBCW | PFSPH | PCT |
| Coefficients | Parameters for estimation of total volume | | | | | | | | | |
| *α*0 | 9.807\*\*\*  (0.954) | 9.770\*\*\*  (1.048) | 10.796\*\*\*  (1.015) | 11.236\*\*\*  (0.948) | 11.080\*\*\*  (0.918) | 11.430\*\*\*  (0.922) | 10.714\*\*\*  (0.907) | 11.680\*\*\*  (0.895) | 11.606\*\*\*  (0.870) | 11.734\*\*\*  (0.872) |
| *β* | -0.003\*\*\*  (0.001) | -0.003\*\*\*  (0.001) | -0.003\*\*\*  (0.001) | -0.003\*\*\*  (0.001) | -0.003\*\*\*  (0.001) | -0.003\*\*\*  (0.001) | -0.002\*\*\*  (0.001) | -0.002\*\*\*  (0.001) | -0.002\*\*\*  (0.001) | -0.002\*\*  (0.001) |
| *γ*1 | 0.531\*\*\*  (0.121) | 0.695\*\*\*  (0.133) | 0.780\*\*\*  (0.129) | 0.712\*\*\*  (0.121) | 0.678\*\*\*  (0.117) | 0.694\*\*\*  (0.117) | 0.572\*\*\*  (0.115) | 0.622\*\*\*  (0.114) | 0.595\*\*\*  (0.111) | 0.571\*\*\*  (0.111) |
| *γ*2 | 0.579\*\*\*  (0.123) | 0.779\*\*\*  (0.135) | 0.832\*\*\*  (0.131) | 0.775\*\*\*  (0.122) | 0.802\*\*\*  (0.119) | 0.741\*\*\*  (0.119) | 0.599\*\*\*  (0.117) | 0.714\*\*\*  (0.116) | 0.697\*\*\*  (0.112) | 0.682\*\*\*  (0.113) |
| *γ*3 | 0.285\*\*  (0.118) | 0.273\*\*  (0.130) | 0.307\*\*  (0.126) | 0.272\*\*  (0.117) | 0.416\*\*\*  (0.114) | 0.241\*\*  (0.114) | 0.235\*\*  (0.112) | 0.277\*\*  (0.111) | 0.294\*\*\*  (0.108) | 0.347\*\*\*  (0.108) |
| *α*1 | -0.728\*\*\*  (0.104) | -0.522\*\*\*  (0.114) | -0.493\*\*\*  (0.110) | -0.594\*\*\*  (0.103) | -0.579\*\*\*  (0.100) | -0.628\*\*\*  (0.100) | -0.805\*\*\*  (0.098) | -0.682\*\*\*  (0.097) | -0.629\*\*\*  (0.094) | -0.742\*\*\*  (0.095) |
| *α*2 | 0.122  (0.297) | -0.033  (0.326) | 0.107  (0.316) | 0.052  (0.295) | 0.050  (0.286) | 0.057  (0.287) | 0.069  (0.282) | 0.058  (0.278) | -0.028  (0.271) | -0.021  (0.271) |
| *α*3 | -0.014  (0.066) | -0.031  (0.073) | -0.067  (0.071) | -0.106  (0.066) | -0.112\*  (0.064) | -0.122\*  (0.064) | -0.093  (0.063) | -0.149\*  (0.062) | -0.166\*\*\*  (0.061) | -0.169\*\*\*  (0.061) |
| *α*4 | 0.027  (0.569) | -0.126  (0.625) | 0.513  (0.605) | 0.392  (0.565) | 0.534  (0.547) | 0.576  (0.550) | 0.239  (0.541) | 0.584  (0.533) | 0.683  (0.519) | 0.693  (0.520) |
| *α*5 | -0.925\*\*\*  (0.150) | -0.936\*\*\*  (0.165) | -0.797\*\*\*  (0.160) | -0.889\*\*\*  (0.149) | -0.874\*\*\*  (0.144) | -0.846\*\*\*  (0.145) | -0.899\*\*\*  (0.142) | -0.898\*\*\*  (0.141) | -0.941\*\*\*  (0.137) | -0.900\*\*\*  (0.137) |
| *α*6 | 0.103  (1.210) | 0.647  (1.330) | 0.949  (1.288) | 0.620  (1.203) | 0.239  (1.165) | 0.528  (1.170) | 0.250  (1.150) | 0.142  (1.135) | 0.108  (1.104) | -0.457  (1.107) |
| *α*7 | -0.184  (0.175) | -0.450\*\*  (0.193) | -0.437\*\*  (0.187) | -0.375\*\*  (0.174) | -0.321\*  (0.169) | -0.311\*  (0.169) | -0.201  (0.167) | -0.250  (0.164) | -0.260  (0.160) | -0.276\*  (0.160) |
| N | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| *R*2 | 0.777 | 0.754 | 0.764 | 0.795 | 0.808 | 0.796 | 0.804 | 0.812 | 0.818 | 0.826 |
| *In-sample R2* (N=50) | 0.796 | 0.757 | 0.779 | 0.818 | 0.818 | 0.814 | 0.830 | 0.826 | 0.846 | 0.846 |
| *Out-of-sample R2*  (N=50) | 0.703 | 0.700 | 0.705 | 0.720 | 0.731 | 0.723 | 0.731 | 0.735 | 0.725 | 0.739 |

Table A1: Parameters estimated for equation [(6)](#_bookmark8) when predicting the effect of the levy on total volume of the composite good using Period-1 data. *α*0 is the constant term, *β* is the parameter for the time trend, *γ*1 to *γ*3 correspond to the Christmas dummy variables and *α*1 to *α*7 are associated with the prices of the 7 products, *p*1 to *p*7, as coded in Table [2.](#_bookmark2) Standard errors in parentheses. In-model and out-of-model R2 refer to regressions using only first 50 datapoints. \*\*\* p¡0.01, \*\* p¡0.05, \* p¡0.1.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | YAS | WRN | AHO | SPFH | CMN | LAF | LASS | PWBCW | PFSPH | PCT |
| Coefficients | Parameters for estimation of number of customers | | | | | | | | | |
| *α*0 | 8.766\*\*\*  (0.580) | 8.547\*\*\*  (0.729) | 9.654\*\*\*  (0.698) | 9.993\*\*\*  (0.657) | 9.744\*\*\*  (0.626) | 10.143\*\*\*  (0.635) | 9.672\*\*\*  (0.563) | 10.430\*\*\*  (0.599) | 10.165\*\*\*  (0.565) | 10.455\*\*\*  (0.539) |
| *β* | -0.002\*\*\*  (0.000) | -0.003\*\*\*  (0.001) | -0.003\*\*\*  (0.001) | -0.003\*\*\*  (0.001) | -0.002\*\*\*  (0.001) | -0.002\*\*\*  (0.001) | -0.002\*\*\*  (0.000) | -0.002\*\*\*  (0.000) | -0.002\*\*\*  (0.000) | -0.001\*\*\*  (0.000) |
| *γ*1 | 0.349\*\*\*  (0.074) | 0.543\*\*\*  (0.093) | 0.580\*\*\*  (0.089) | 0.514\*\*\*  (0.083) | 0.486\*\*\*  (0.080) | 0.502\*\*\*  (0.081) | 0.391\*\*\*  (0.072) | 0.439\*\*\*  (0.076) | 0.419\*\*\*  (0.072) | 0.410\*\*\*  (0.069) |
| *γ*2 | 0.460\*\*\*  (0.075) | 0.685\*\*\*  (0.094) | 0.676\*\*\*  (0.090) | 0.628\*\*\*  (0.085) | 0.642\*\*\*  (0.081) | 0.598\*\*\*  (0.082) | 0.478\*\*\*  (0.073) | 0.565\*\*\*  (0.077) | 0.549\*\*\*  (0.073) | 0.566\*\*\*  (0.070) |
| *γ*3 | 0.167\*\*  (0.072) | 0.170\*  (0.090) | 0.184\*\*  (0.087) | 0.163\*\*  (0.081) | 0.274\*\*\*  (0.078) | 0.136\*  (0.079) | 0.115  (0.070) | 0.148\*\*  (0.074) | 0.175\*\*  (0.070) | 0.244\*\*\*  (0.067) |
| *α*1 | -0.307\*\*\*  (0.063) | -0.294\*\*\*  (0.079) | -0.331\*\*\*  (0.076) | -0.343\*\*\*  (0.071) | -0.337\*\*\*  (0.068) | -0.350\*\*\*  (0.069) | -0.350\*\*\*  (0.061) | -0.364\*\*\*  (0.065) | -0.363\*\*\*  (0.061) | -0.402\*\*\*  (0.059) |
| *α*2 | 0.190  (0.180) | 0.154  (0.227) | 0.295  (0.217) | 0.278  (0.204) | 0.223  (0.195) | 0.247  (0.198) | 0.140  (0.175) | 0.217  (0.187) | 0.196  (0.176) | 0.167  (0.167) |
| *α*3 | -0.058  (0.040) | -0.074  (0.051) | -0.092\*  (0.049) | -0.124\*\*\*  (0.046) | -0.126\*\*\*  (0.044) | -0.141\*\*\*  (0.044) | -0.115\*\*\*  (0.039) | -0.155\*\*\*  (0.042) | -0.177\*\*\*  (0.039) | -0.190\*\*\*  (0.038) |
| *α*4 | -0.562  (0.346) | -0.453  (0.434) | -0.258  (0.416) | -0.354  (0.391) | -0.384  (0.373) | -0.323  (0.379) | -0.311  (0.335) | -0.195  (0.357) | -0.207  (0.337) | -0.246  (0.321) |
| *α*5 | -0.246\*\*\*  (0.091) | -0.318\*\*\*  (0.114) | -0.252\*\*  (0.110) | -0.276\*\*\*  (0.103) | -0.261\*\*\*  (0.098) | -0.258\*\*  (0.100) | -0.242\*\*\*  (0.088) | -0.250\*\*\*  (0.094) | -0.251\*\*\*  (0.089) | -0.202\*\*  (0.090) |
| *α*6 | 0.223  (0.735) | 0.785  (0.924) | 1.020  (0.886) | 0.890  (0.833) | 0.623  (0.794) | 0.839  (0.806) | 0.339  (0.714) | 0.445  (0.761) | 0.544  (0.717) | -0.220  (0.687) |
| *α*7 | -0.172  (0.107) | -0.400\*\*\*  (0.134) | -0.402\*\*\*  (0.128) | -0.371\*\*\*  (0.121) | -0.375\*\*\*  (0.115) | -0.350\*\*\*  (0.117) | -0.270\*\*  (0.103) | -0.302\*\*\*  (0.110) | -0.326\*\*\*  (0.104) | -0.276\*\*\*  (0.099) |
| N | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 99 |
| *R2* | 0.732 | 0.743 | 0.756 | 0.763 | 0.776 | 0.763 | 0.747 | 0.770 | 0.785 | 0.805 |
| *In-sample R2* (N=50) | 0.760 | 0.774 | 0.778 | 0.802 | 0.804 | 0.787 | 0.769 | 0.794 | 0.815 | 0.836 |
| *Out-of-sample R2*  (N=50) | 0.647 | 0.675 | 0.714 | 0.705 | 0.717 | 0.708 | 0.692 | 0.693 | 0.734 | 0.707 |

Table A2: Parameters estimated for equation [(6)](#_bookmark8) when predicting the effect of the levy on number of customers purchasing composite good using Period-1 data. *α*0 is the constant term, *β* is the parameter for the time trend, *γ*1 to *γ*3 correspond to the Christmas dummy variables and *α*1 to *α*7 are associated with the prices of the 7 products, *p*1 to *p*7, as coded in Table [2.](#_bookmark2) Standard errors in parentheses. In-model and out-of-model R2 refer to regressions using only first 50 datapoints. \*\*\* p¡0.01, \*\* p¡0.05, \* p¡0.1.

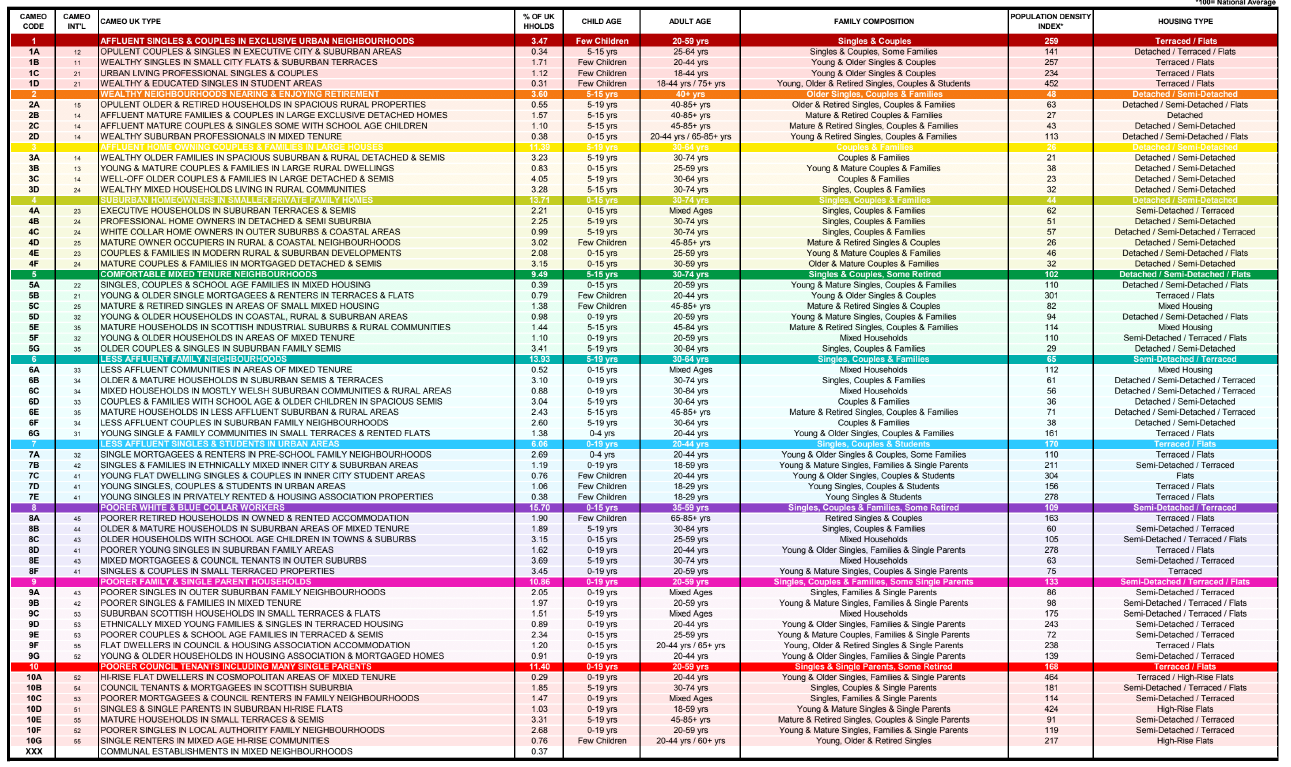


Table A3: Descriptors of Cameo geo-demographic segments