|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 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