

Appendix 4: Impact of Housing Service Expenditure on Food Purchasing (£ per year). The coefficients represent the change in purchasing in pounds and pence with a 10% decrease in LA service spending (95% Confidence Intervals in brackets).

	Fruit and Vegetables	HFSS Foods	Takeaways
Unadjusted model			
Full Sample	0.149 (0.100, 0.199) p<0.001	0.220 (0.069, 0.371) p=0.004	0.056 (0.012, 0.090) p=0.001
Adjusted Model¹			
Full Sample	0.145 (0.097, 0.193) p<0.001	0.204 (0.058, 0.349) p=0.006	0.056 (0.022, 0.089) p=0.001
Adjusted Model stratified by IMD²			
1 (most deprived)	0.207 (0.094, 0.319) p<0.001	0.511 (0.067, 0.955) p=0.025	0.062 (-0.013, 0.136) p=0.102
2	0.170 (0.062, 0.279) p=0.003	0.110 (-0.227, 0.447) p=0.516	0.069 (-0.017, 0.156) p=0.114
3	0.097 (-0.935, 0.230) p=0.146	0.086 (-0.297, 0.469) p=0.656	0.100 (0.020, 0.179) p=0.014
4	0.079 (-0.018, 0.176) p=0.109	0.239 (-0.141, 0.619) p=0.214	0.066 (-0.014, 0.145) p=0.104
5 (least deprived)	0.034 (-0.051, 0.119) p=0.430	0.126 (-0.111, 0.363) p=0.293	0.004 (-0.051, 0.059) p=0.886
Adjusted Model stratified by rural/urban area			
Predominantly Urban	0.289 (0.116, 0.272) p<0.001	0.345 (0.130, 0.560) p=0.002	0.081 (0.034, 0.128) p=0.001
Urban with Significant Rural	0.063 (-0.004, 0.129) p=0.063	-0.061 (-0.322, 0.200) p=0.641	0.011 (-0.041, 0.064) p=0.665
Predominantly Rural	0.120 (0.034, 0.203) p=0.005	0.174 (-0.032, 0.380) p=0.098	0.041 (-0.017, 0.099) p=0.161
Adjusted Model stratified by level of reductions in working age benefits³			
Lowest quartile (<£321.5)	0.015 (-0.069, 0.099) p=0.729	0.062 (-0.180, 0.303) p=0.613	0.005 (-0.055, 0.065) p=0.873
Second quartile (£321.5 - £403)	0.087 (-0.007, 0.175) p=0.052	0.141 (-0.152, 0.435) p=0.341	0.068 (-0.002, 0.137) p=0.056
Third quartile (£403 - £479)	0.190 (0.073, 0.306) p=0.002	0.218 (-0.134, 0.569) p=0.222	0.131 (0.051, 0.211) p=0.002
Highest quartile (>£479)	0.196 (0.087, 0.306) p=0.001	0.367 (0.010, 0.743) p=0.056	0.033 (-0.029, 0.095) p=0.297

¹ Model adjusted for GDHI, unemployment rate, and LA expenditure on other services.

² IMD represents relative deprivation of LAs, categorised into quintiles.

³ We stratified by quartiles of reductions in working age benefit by LA, using a dataset estimating the cumulative decreases in benefits for working age people due to welfare reforms between 2010-2015 for each LA.